

A CRITICAL REVIEW OF JANPADODHAWANSA WITH SPECIAL REFERENCE TO COVID-19

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ABSTRACT

Coronavirus disease 2019 (COVID-19), the highly contagious viral illness is caused by severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2). It has had a catastrophic effect on all countries. It was declared a pandemic on March 11, 2020. Ayurveda, too, has a unique description of *Janpadodhawansa*, which can be correlated to an epidemic. *Vikrit Vayu* (air), *Jala* (water), *Desh* (area), *Kala* (season) are four major factors in the causation of *Janpadodhawansa* as described by *Acharya Charak*. In modern epidemiology, environmental factors are one of the major components of the epidemiological triad. Therefore, a detailed review of *Janpadodhawansa* in reference to COVID-19 is much needed as the concept available in older times prove very helpful in the modern era.

KEYWORDS: *Janpadodhawansa*, COVID-19, *Janmaar*, *Marak*.

INTRODUCTION

Today, the world is facing a major health challenge in the form of the COVID-19 pandemic, which is a highly contagious and still untreatable disease. Although many medications are used to alleviate the symptoms of COVID-19, there is no established medication for this purpose. As of 31 March 2022, more than 483 million confirmed COVID-19 cases and 6.1 million related fatalities have been reported to WHO. In India, currently 43 025 775

confirmed cases of COVID-19 are there and 521 211 deaths have been caused so far. [Data reported to WHO- March 31, 2022].^[1]

Coronavirus disease 2019 (COVID-19), the highly contagious viral illness is caused by severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2), has had a catastrophic effect on the world's demographics emerging as the most consequential global health crisis since the era of the influenza pandemic of 1918. The lungs are the main organs affected, leading to pneumonia and respiratory failure in severe cases that may require mechanical ventilation. Occasionally, the patient may experience gastrointestinal, cardiac, and neurologic symptoms with or without pulmonary involvement. The first patient of this disease was reported to be infected in Wuhan, China.

Ayurveda, the eternal life science from many centuries, proved to be the most efficient tool in a health management system which gives more importance to prevention than cure. Ayurveda describes many unique concepts of medicine, *Janpadodhawansa* is one of them.

Janpadodhawansa^[2] word is made of two words *janpad* means group of people and *dhawansa* means demolition. Therefore the literal meaning of the term *Janpadodhawansa* is demolition or annihilation of the community.

According to Acharya Caraka, in *Janpadodhawansa* individuals having distinct *Prakriti* (constitution), *Aahara* (diet), *Deha* (body), *Bala* (strength), *Satmya* (mental strength), *Mana* (mind) and *Vaya* (age) may be affected by one particular disease.^[3] Acharya *Susruta* called it *Marak*^[4] while Acharya *Bhela* called it *Janmaar*.^[5] The COVID-19 pandemic is considered a type of *Janpadodhawansa* according to Ayurveda. Ayurveda has also offered a clear concept of *Aupasargik Roga* when the principles of this compiled, analyzed, and interpreted, they have similarities to a modern theory of infectious disease. In Ayurveda, the microbial infection can be elucidated in the terms of *Bhuta*, *Rakshasa*, *Griha*, which are mentioned as the causes of *Marak* by Acharya *Susruta*.^[6]

Acharya *Susruta* describes *Aupasargik Roga* which can be transmitted from person to person. Modes of spread mentioned are physical contact (Intercourse / frequent coming in contact/ involve in any gathering), direct physical touch, exhalation of respiration, eating together, sleeping nearby, sitting nearby, and using cloth, ornaments and emoluments.

Literature review

The epidemic is not a concept of the modern era. Ayurveda, the ancient traditional medical system, explained this topic very uniquely. *Acharya Charak* called it *Janpadodhawansa*. *Vikrit Vayu* (air), *Jala* (water), *Desh* (area), *Kala* (season) are four major factors in the causation of *Janpadodhawansa* described by *Acharya Charak*.^[7] The main causation of *Janpadodhawansa* is described as *Adharma*.^[8]

Adharma means violation of the rules of nature and life. The root cause of *Adharma* is *Pragyapradha* (delinquency of wisdom) *Asatmya indriyarth sanyog* (improper contact of the senses with their objects) and *Parinaam* (*Kala* or time). *Pragyapradha* is deranged Dhee, Dhriti, and Smriti (mistake due to lack of intellect, awareness, or memory).^[9]

Table 1.1: Different factors of *janpadodhawansa*.

<i>Vikrit Vayu</i>	Air that is not in conformity with the season, totally calm or violently blowing, exceedingly rough, intensely cold, intensely hot, excessively dry, excessively humid, terribly clamorous, blowing from contrary directions and clashing with each other (winds blowing in opposite direction), violently spinning (whirlwind) and associated with unwholesome odour, moisture, sand, dust and smoke. ^[10]
<i>Vikrit Jala</i>	Water that does not seem normal in smell, colour, taste and touch, has excessive stickiness. ^[11]
<i>Vikrit Desha</i>	Any land having abnormal colour, odour, taste and touch, that which is excessively damp. ^[12]
<i>Vikrit Kala</i>	Abnormal seasonal variations ^[13]

Acharya Susruta called it *Marak* and has described *Vikrit ritu* (seasonal variation), *Abhishaap*, *Rakshasa – Bhutadi* and *Adharma* are the main cause.

Acharya Bhela describes this as *Janmaar* caused by *Rituvyapati* (Seasonal variation).

Acharya Susruta describes *Aupasargik Roga* which can transmit from person to person. Modes of spread mentioned are caused by physical contact (Intercourse /frequent coming in contact / involve in any gathering), direct physical touch, exhalation of respiration, eating together, sleeping nearby, sitting nearby, and using cloth, ornaments and emoluments. Some of the examples quoted are *Kushtha* (a group of skin disorders), *Jwara* (fever), *Shosha*

(Tuberculosis), Netraabhishtyanda (Conjunctivitis) and *Aupasargik Roga*.^[14]

Table 1.2: Different mode of transmission in *aupasargik roga*.

S. No.	Ayurveda	Modern science
1.	<i>Prasanga</i>	Mutual contact
2.	<i>Gatrasansparsha</i>	Skin to skin touch
3.	<i>Sahabhojana</i>	Sharing food
4.	<i>Nihashwasa</i>	Exhaled air
5.	<i>Shashaiya</i>	Sleeping closely
6.	<i>Asana</i>	Sitting close to each other
7.	<i>Vatra</i>	Clothes
8.	<i>Malay</i>	Using handkerchief and towels
9.	<i>Anulepana</i>	Using paste of chandana on the body after bath

Modern Aspect of COVID 19

Coronaviruses derive their name from the Latin word “corona” meaning crown. The name refers to the unique appearance of the virus under an electron microscope as round particles with a rim of projections resembling the solar corona. They are enveloped in positive-sense, single-stranded RNA viruses that were first isolated from humans in 1965. Coronavirus belongs to the Coronaviridae family, which is known to produce mild respiratory diseases in humans.^[15] Although our understanding of COVID-19 epidemiology is evolving, it is assumed that SARS-CoV-19 is mainly transmitted via droplets and close contact with people carrying the virus. However, recent reports have also proposed the possibility of the virus being contracted via various surfaces, gastrointestinal transmission, and potentially airborne exposures. The inhaled virus SARS-CoV-19 likely binds to epithelial cells in the nasal cavity and starts replicating. ACE2 is the main receptor. The virus then propagates and migrates down the respiratory tract along the conducting airways, and a more robust innate immune response is triggered. In this phase, common flu-like symptoms appeared in patients. Unfortunately, about 20% of the infected patients will progress and will develop pulmonary infiltrates and some of these will develop very severe diseases.^[16]

Clinical features of COVID-19

Main symptoms are fever, cough, sore throat, malaise, pain in chest, great loss of strength, dyspnoea. If alimentary tract is invaded, there will be vomiting, diarrhoea or both.^[17]

DISCUSSION

The concept of *Janpadodhawansa* in Ayurveda when analysed can be compared to a pandemic. Contamination of *Vayu*, *Jala*, *Desh*, and *Kala* is the main responsible factor of *Janpadodhawansa*. These factors, when seen in regard to the SARS COVID-19 pandemic play a very significant role. The role of *Vikrit Vayu* (contaminated air) is established as SARS COVID-19 is transmitted via is droplet as well as airborne exposure.^[18]

There is no direct role of *Vikrit Jala* (contaminated water) in the transmission of SARS COVID-19 as it is not water borne disease. But there is a lot of evidence that water waste of sewage can be a potential source of transmission of SARS COVID 19. Studies show that for the Coronavirus-infected communities living in apartment buildings, wastewater plumbing systems have been considered a potential pathway for transmitting the SARS-CoV-19.^[19]

The role of *Vikrit Desh* (contamination of area) in the transmission of disease is understandable as travel to Covid infected area can also increase the chances of COVID-19 transmission in other areas.

Considering the *Kala* or season of infection for COVID-19, it is seen COVID cases increase mainly in *Vasant Ritu* (autumn) and also in *Hemant Ritu* (winter) in some places. Also COVID cases decrease in *Grishama Ritu* (summer). Studies regarding the effect of temperature and humidity on the seasonal viability and transmissibility of COVID-19 also support the hypothesis that cold and dry conditions were potentiating factors on the spread of the virus.^[20]

Studies suggest that higher humidity can enhance the body's ability to fight off infection; that the Coronavirus decays faster at close to 60% relative humidity than at other levels; and that drier air can lead to greater numbers of tiny Coronavirus particles that travel farther and penetrate deeper into the lungs.^[21]

Acharya Susruta well explained the *Nidana* (cause) of *Marak*. In the COVID-19 pandemic, *Bhuta-Rakshasadi* can also correlate with Coronavirus 19 virus.

The signs and symptoms of SARS COVID 19 can be correlated with *Sannipataj Jwara* with *Vata* and *Kapha* predominance. It can also be considered as *Bhutabhisangaja Jwara* as it is caused by a virus.

CONCLUSION

Ayurveda is a traditional medical system that gives more importance to the prevention of disease than its treatment, as in an epidemic, preventive measures are of real time importance. SARS COVID 19 is a viral disease which spread through air or contact exposure. Ayurvedic principles in this pandemic situation are still relevant in present era too. According to signs and symptoms we can correlate COVID-19 to *Vata Kaphaj* predominant *Sannipataj Jwara*, so the management should be planned according to this.

REFERENCES/ BIBLIOGRAPHY

1. WHO, COVID-19 Situation in the WHO Southeast Asia Region, available at <https://> (Accessed on 25/05/2020)
2. Sharma Priya Vrata, English translation on Charaka Samhita by Agnivesha, Chaukhambha Orientalia, Varanasi, 1981; 1: 314-315.
3. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, VimanaSthan, Chapter, 2009; 3 – 6.
4. Bhishagratna Kunjalal, English translation on Sushruta Samhita edited by Laxmidhar Dwivedi -Chowkhambha Sanskrit Series Office, Varanasi, 2002; 2: 49-50.
5. Sharma Priya Vrata, edited Bhela Samhita text with English translation, commentary and critical note by Dr K.H. Krishnamurthy, Chaukhambha Vishvabharati, Varanasi (India), reprint, 2003; 58-61.
6. Shastri Ambika Datt, Sushruta Samhita by Maharishi Sushruta with Ayurveda Tattva Sandipika Commentary by, Chaukhambha Sanskrit Sansthan, Varanasi, Eleventh Edition, Sutra Sthana, Chapter, 1997; 6: 19- 22.
7. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, Vimana Sthan, Chapter, 2009; 3: 6-8.
8. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, Vimana Sthan, Chapter, 2009; 3 - 20.
9. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, Sharir Sthan, Chapter, 2009; 1: 102.
10. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, VimanaSthan, Chapter, 2009; 3: 6(1).
11. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, VimanaSthan, Chapter, 2009; 3: 6(2).
12. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha

- Sanskrit Series Office, Varanasi, Vimana Sthan, Chapter, 2009; 3: 6(3).
13. Sharma R.K. & Dash Bhagawan, Eng. translation on Charaka Samhita, Chowkhambha Sanskrit Series Office, Varanasi, Vimana Sthan, Chapter, 2009; 3: 6(4).
 14. Shastri Ambika Datt, SushrutaSamhita by Maharishi Sushruta with Ayurveda Tattva Sandipika Commentary by, Chaukhambha Sanskrit Sansthan, Varanasi, Eleventh Edition, Nidana Sthana, Chapter, 1997; 5: 32-33.
 15. Cao W, Li T. COVID-19: towards understanding of pathogenesis. Cell Res, 2020; 30(5): 367–369. DOI: 10.1038/s41422-020-0327-4
 16. Yuki K, Fujiogi M, Koutsogiannaki S. COVID-19 pathophysiology: a review. Clin Immunol, 2020; 215: 108427. DOI: 10.1016/j.clim.2020.108427
 17. WHO, Coronavirus Disease (Covid-19) Outbreak: Rights, Roles and Responsibilities of Health workers, including Key Considerations for Occupational Safety and Health, Availablefrom: https://www.who.int/docs/default-source/coronaviruse/who-rights-roles-responhwcovid19.pdf?sfvrsn=bcabd401_0 [Retrieved on 2020 Jun 30].
 18. Mahesh Jayaweera, a,* Hasini P, b Bu Gu, Ja Ma et al. Transmission of COVID-19 virus by droplets and aerosols: A critical review on the unresolved dichotomy Published: September, 2020; 18. <https://doi.org/10.1371/journal.pone.0238339>
 19. Hai N T, Gi T Le, c Do Th et al. SARS-CoV-2 coronavirus in water and wastewater: A critical review about presence and concern Published online, 2020; 1. doi: 10.1016/j.envres.2020.110265
 20. Paulo Mecnas, Re T d, Ro M B, An C, Ro V et al. Effects of temperature and humidity onthe spread of COVID-19: A systematic review
 21. <https://www.medicalnewstoday.com/articles/how-humidity-may-affect-covid-19-outcome>