

Literature Study of *Janapadodwansa* with special reference to Covid-19

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Abstract

Ayurveda the historical science of Indian medicine described various diseases and their management. Ayurveda described concepts of Janpadodwans which means the vitiation of Jala (Water), Vayu (Air), Desha (Soil), and Kala (Environmental change According to season) can lead to various infectious diseases. Currently such types of diseases i.e. Covid-19 creating great health burden since large number of global population affected with pathogens. Ayurveda described causes, transmission mode and prevention of such pathological conditions under the heading of Janpadodhwans. Acharya Charak mainly emphasizes concept of Janpadodhwans as Sankramak roga. The various literatures of Ayurveda described concept of Janpadodhwans / Sankramak roga. Present article dealt with Ayurveda perspective on Janpadodhwans with special reference to Covid-19.

Keywords: Ayurveda, Janpadodhwans, Sankramak roga, Bhoota–Graha Roga, Covid-19.

Introduction

Covid -19 is major health problem from 2019. 1st case of Covid -19 observed from China in Dec.2019 and this disease start to cover remaining world. Covid-19 patients show symptoms of coughing, sneezing, high grade fever, etc. and spread through personal contact, as well as social contact i.e. contact to utensils, ornaments, cloths, metal, water, food material, shake hands and hugs.

In Ayurveda Acharya Charaka already describe concept of *Janapadodwansa* and related diseases which includes disease cause due to pollution of *Jala* (Water), *Vayu* (Air), *Desh* (Soil), *Kala* (Environmental change according to seasonal change).

Covid-19 is the viral disease which cause due to coronavirus. After infection of this virus, disease spread rapidly through all mode of transmission in relation with *Jala*, *Vayu*, *Kala*, *Desha*. This literature study helps to understand Covid-19 from Ayurveda view and also helps to prevent spread of covid-19.

Material & Method

The ancient literature of Ayurveda like Bruhatrayi, Laghu Trayi along with authenticated online literature related to covid-19 was studied for this review article.

Janpadodhwans

Janpadodhwans mainly described by Acharya Charaka which resembles population destruction in an area. The people of similar demographic regions live in some common factors like air, climatic conditions, and habitats, etc. As per Ayurveda, it can be stated that the vitiation of *Jala*, *Vayu*, *Desha*, and *Kala* can lead to *Janpadodhwans*.^[1]

Acharya Charaka described that *Adharma* and *Pradnyaparadh* can enhance the provenances of *Janpadodhwans*.^[2] Awful conduction of *Ritucharya* & *Dincharya*, *Vega vidharan*, and *Paapkarma* reduces immunity thus enhances susceptibility towards *Janpadodhwans*. *Prasanaga* (Sexual contact), *Gatra Sansparsha* (Touch), eating & sleeping together and sharing cloths & ornaments, etc. can be considered as a mode of transmission for *Kustha*, *Jwara*, *Shosha*, and *Netrabhishyanda*. This diseases initially considered as *Aupasargikrogas roga* (Infectious disease) which spread from person to person; contagious disease mainly spread through contacts.

The modern science also mentioned some diseases which spread from person to person and occurs due to the microbial infections including leprosy, conjunctivitis, tuberculosis and infectious fever.

Veda's description

Atharvaveda mentioned role of *Krimi* (Microorganism) along with *Rakshas*, *Yatuthan* and *Gandharav* in disease prevalence. Later on concepts of *Khanda*, *Sukta* and *Mandal* also came in practices. Atharvaved brief about a prayer regarding to prevent *Krimis* infection which says that one should not get affected by *Krimis*. The literatures of this period also mentioned that sun-rays can destroy *Krimis* and human body easily gets affected by *Krimis* in the absence of sun-rays. The *Krimis* can enter into body via contaminated water and foods. Agnipurana and Garudh Purana mentioned that microbes reside inside the abdomen in the form of *Krimis* and causes diseases.

Charka Samhita Description

Charka Samhita not described infectious diseases as original context but as described by Agnivesh in Nidan 1/17 mentioned eight types of *Aagntuja Jwar* which can occur due to the infections of microorganisms. *Bhutadibhi Sang* was described as disease which may occur due to the microbial invasion and later on another term *Bhutasvish krimi* was correlated with *Bhutadibhi Sang*. This concept mainly emphasizes the role of toxins and poisons secreted by *Krimis* towards the disease manifestation. The heterogenous fever described here which occurs due to the vitiation of *Doshas* associated with microbial infections. The concept of *Rajyakshma* also described by Charak samhita which may occurs due to the *Rajyakshama's* microorganisms. Viman sthan of Charak Samhita described *Krimis* as two types; innate and diseases causing.^[3] Innate *Krimi* not considered responsible for diseases manifestation while another form was considered as diseases causing organism. Later on these *Krimis* were classified as; *Purishaj*, *Malaj*, *Raktaj* and *Kaphaj*. Similarly external *Krimis* were also reported which spread through clothes, hair and moustache. Charak viman mentioned effects of *Desha* and *Kala* towards the epidemic diseases and elaborated terms *Aapgat guna*. It is stated that the mass population mainly get affected by infectious disease due to the influence of *Desha* and *Kala* for certain period of time.

Susruta Samhita Descriptions

Acharya Sushrut mentioned mode of transmission along with types of infectious diseases: Susruta Samhita considered *Sankramana* as

Aupsargika Roga which can spread through sexual intercourse, air contamination, physical contact, eating together, sharing objects and sleeping together. Here leprosy, tuberculosis, fevers and conjunctivitis were described along with some other diseases which can transmit from one to another person.^[4]

Ashtang Sangrah Samhita Descriptions

Here concept of *Aagantuj Roga* was elaborated which can occurs due to the Garbage, dirt, Debris of dead body, contaminated water, infected fishes and infection of urine/faces can leads pathogenesis of such diseases.

Acharya Bhav Prakash Samhita Descriptions

Kushta, *Upadamsa* and endemic fever were considered as contagious disease which transmits from one person to another person. Skin contact, sexual intercourse, infected air and sharing objects of infected person, etc. were considered as mode of transmission. Bhav prakash mentioned *Phiranga Roga* as *Gandharoga* under highly contagious condition. The *Phirangini* relates with diseased female, the physical contact and sexual intercourse with such person can transmit disease. Somewhere it is considered as *Agantu* disease caused by external factors.

Yogratankar Descriptions

Yogratnakar emphasizes *Netraroga* and *Twak Roga* as communicable disease which occurs through pathogens. These diseases spread via physical contact, eating and sleeping with infected person and sharing objects of diseased patients. *Kushta*, *Shosha*, *Netrabhishy* and *Jwara* were considered as *Aupsargika roga* which can transmit from one person to another.

COVID – 19

Corona Virus Disease – 19 (COVID – 19) is an infectious illness caused by novel Corona Virus – 2 now called Severe Acute Respiratory Syndrome Corona Virus – 2 (SARS CoV 2). Coronaviruses (CoV) are a large family of viruses. A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans. They are a large family of single-stranded RNA viruses (+ssRNA). The World Health Organization has declared it a Public Health Emergency of International Concern (PHEIC) initially and as Pandemic has confirmed its presence on all continents except Antarctica. [5] The virus is not considered airborne but thought to be natural and have an animal origin through spillover

an infection. Coronaviruses are zoonotic, meaning they are transmitted between animals and people. [6] Common human coronaviruses, including types 229E, NL63, OC43, and HKU1, usually cause mild to moderate upper-respiratory tract illnesses, like the common cold. Most people get infected with one or more of these viruses at some point in their lives. This applies to common human coronaviruses and should not be confused with coronavirus disease in 2019 (formerly referred to as the Novel Coronavirus).

Human corona viruses can sometimes cause lower-respiratory tract illnesses, such as pneumonia or bronchitis. This is more common in people with cardio-pulmonary disease, people with weakened immune systems, infants, and older adults. [7]

Aetio-Pathogenesis

The virus is not considered airborne but thought to be natural and have an animal origin through spill over infection. Corona viruses are zoonotic, meaning they are transmitted between animals and people. [8] This is due to un-regulation of such infected meat by the local government, which according to Ayurveda comes under *Pragnyaparadha, Adharma*; leading to the present pandemic. Ayurveda has mentioned various rules and regulation regarding wholesome and unwholesome diet especially regarding which *mamsa ahara* to be chosen and also the importance of well cooked food.

Acharya Charaka has mentioned that meat of the animal which is self-dead, emaciated, very fat, old, too young, killed by poisoning, reared in unnatural habitat or killed by a tiger, snake, etc. should be avoided. [9] Acharya Sushruta is more specific when he says *vyadhita mamsa* should be avoided i.e. animals infected or diseased should be avoided. [10] Such meat of infected and or diseased animal is said to be *tridoshakara* and responsible for the death. This also emphasizes the fact that the zoonotic transfer of disease was known to our Acharyas. While mentioning *Sannipataja Jwara*, Acharya Charaka has mentioned that any aetiological factors which lead to *tridosha prakopa* can cause *Sannipataja Jwara*. [11] Once the infected food gets entry into the body in absence of *vyadhi utpadaka pratibandhabhava* (immunity) the *tridosha* gets vitiated in the *amashaya, pittasthana* thereby leading to *agnimandya* and *jwara* whereas, if *vyadhikshamatwa* is very low it may lead to *Shwasa, Atyayika* condition.

Acharya Susruta says that such patient, when gets *jwarita* he is prone to transfer his disease by body contact (*gatra sansparshat*), inhalation (*nishwashat*), sharing of beds etc (*saha sayyasanat*), sharing the foods (*saha bhojanat*) and sharing the flowers/ ornaments/ clothes etc (*maalya*). [12]

Acharya Dalhana mentions diseases like *Shitali* etc is to be included in *aupasargika* i.e. disease spread by the microorganism. Acharya Charaka also stated 2 types of *krimi* one is *vaikarika* means pathogenic and the other, *Sahaja* which means non-pathogenic. [13]

In Charaka Samhita it is mentioned that *Agantuja Vyadhis* are caused also due to *krimi, Bhuta* (microorganism), *visha* (toxins). [14] The Virus is something not *swabhavayukta* for the *Sharira*; it is a foreign body or *visha*. The *vishaktaanna* reaches the *Pittasthana*. *Vyadhi Utada Pratirodhaka Bhava* (immunity) comes into action if they are strong enough there is no formation of disease. The occurrence and development of COVID-19 depends on the interaction between the virus and the individual's immune system. Viral factors include virus type, mutation, viral load, viral titer, and viability of the virus in vitro. The individual's immune system factors include *Prakruti*-genetics (such as HLA genes), *Vaya* (age), *Linga* (gender), *Aaharasausthava* (nutritional status), *Tridosha* (neuro-endocrine-immune regulation), *Bala*, and *Vyayama Shakti* (Physical status). Further, if such a patient comes in contact with another person the *Aupasargikata* is initiated. *Gatra Sansparshat, Nishwasat, Sahabhojanat, Shayya, Asanat, Vastramalyanulepanat* contributes to the human transfer of the disease. Symptoms of common human coronaviruses: runny nose (*pratishyaya*), sore throat.

Discussion

Charak has mentioned terminology of communicable disease including *Janapadodhwansa* and *Aupsargikarogas*. *Janapadodhwansa* was considered as mass destruction associated with *Asdushitavayu, Jala, Kala and Desha*. *Adharma, Paapkarma*, awful conduction of *Dincharya & Ritucharya* and loss of immunity, etc. can be considered as responsible factors of *Janapadodhwans*.

Modern science described term endemic and epidemic related to the effects of infectious disease on mass destruction. Factors such as climatic and environmental condition of specific area contribute significantly towards the prevalence of such disease.

Along with fever, tuberculosis, leprosy and conjunctivitis, Covid-19 affect mass population and transmitted through direct or indirect ways. This study make an attempt to elaborate mode of transmission of covid-19 by using *Janapadodhwansa* literature

Conclusion

Samhita's described diseases caused by microorganism and elaborated concept of *Janapadodhwans*. *Jwar* and *Kushtha* described by Acharya Charak under *Bhutabisangaj* as diseases similar to infectious disease. This article concluded that ancient Aacharya were equipped with knowledge of communicable or infectious diseases similar to covid-19 which occurs due to the microbial invasion.

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