

Covid 19 in Ayurveda Parlance

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Abstract - World community is facing an unprecedented pandemic of novel corona virus disease (COVID-19) caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). The disease has spread globally with more than 5.7 million confirmed cases and 1,373,294 deaths as of November 22, 2020. Despite worldwide efforts to contain it, the pandemic is continuing to spread. At present, the global momentum is unabated, and a second wave is anticipated. The experience and lessons learnt from the earlier severe acute respiratory syndrome (SARS) epidemics appear inadequate and call for better approaches and strategies in public health and medical care. Ayurveda interventions become even more relevant by the fact that there is an elaborate description of causation and management of epidemic (Janapadodhwamsa) in Ayurveda. TCM (traditional Chinese medicine) was officially included in the Chinese guideline on diagnosis and treatment of COVID-19. According to official data released on 23 April, among the confirmed COVID-19 cases, 74,187 were given TCM, accounting for 91.5% of the total cases. An understanding of COVID-19 epidemiology and pathogenesis as learned through on-going pandemic may help us drawing a feasible plan of action. Through maintenance of Dincharaya, Ritucharya and Sadvritta, physical and mental health is secured. Panchakarma, Aushadha, & Rasayana can be helpful in treating this disease. In this article effort has made to find how Ayurveda can help to face growing challenge of covid.

Index Terms - Covid 19, Pandemic, Ayurveda, TCM.

INTRODUCTION

Due to advancement of science and research life span of human being has been increased but simultaneously threat of communicable disease is increasing day by day. Communicable disease (1) spread from person to another or from an animal to a person. The spread often happens via air borne viruses or bacteria, but also through blood or other bodily fluids. It may also spread easily due to large population, crowd, unhygienic conditions and low immunological status

of individual. An outbreak of pneumonia in December 2019 in Wuhan, China, has now been determined to be caused by a novel corona virus. It is named as Severe Acute Respiratory Syndrome Corona virus 2 (SARSCoV-2). The disease has since spread to 218 countries and regions, with more than 5.7 million confirmed cases and more than 1,373,294 deaths as of November 22, 2020. Despite worldwide efforts to contain it, the pandemic is continuing to spread.

Utilization of traditional Chinese medicine in Wuhan to treat COVID-19 cases sets an example demonstrating that traditional health care can contribute to treatment of these patients successfully. An understanding of COVID-19 epidemiology and pathogenesis as learned through on-going pandemic may help us drawing a feasible treatment strategy. About 80% of COVID-19 cases present with mild symptoms requiring only primary medical care. Of the rest 20% cases 15% require urgent medical attention at secondary health care services. Remaining 5% are critical cases requiring an intensive care and hence require a transfer to tertiary health care units equipped with ICU [1].

Disease profile in the light of review of classical Ayurveda literature-

Sushruta has described epidemic fevers presenting with cluster of symptoms like cough, breathing difficulty, vomiting and headache, which resembles fevers causing severe acute respiratory syndrome (SARS) [2]. Dalhana, the commentator additionally refers to symptoms like anosmia (unable to smell), which are of interest in understanding COVID-19. He also pointed to the nasal passages as the point of contact with the causative agent of the disease. The Charaka samhita devotes an entire chapter for discussion on epidemics and points out how people with different constitutions can be affected by the same disease due to the influence of common etiological factors like air, water, place and time, but

does not list or describe specific epidemic diseases [3]. Sushruta Samhita also listed fevers among diseases that are contagious [4]. Out of the eight broad categories of fevers described in Ayurveda, the agantuja jvara are caused by external agents [5]. Abhishāṅgaja jvara is one of the sub-categories of agantuja jvara which includes a sub-type of fever called bhutabhishāṅgaja jvara [6]. Chakrapanidatta clarified that bhuta means vishakrami or a virulent organism [7].

Rakshoghna karma or fumigation with herbs, which is recommended to prevent wounds from suppurating and also for purifying air have been found to exhibit antimicrobial activity also against viruses. Charaka samhita specifically advised self-protection (atmagupti) and relocating to places that have not been affected [8].

Classical Ayurveda texts provide guideline for analysis of diseases not listed in the literature. Ashtanga hridaya pointed out that analytical understanding of a disease in terms of its finer constituents like samprapti, site of manifestation and specific nidana is more important than identifying it by its name [9]. A new disease (anukta vyadhi) can be understood by study of nidana, dosha, sthana. Since the clinical features of COVID-19 invariably indicates imbalance of all the three dosha with fever as a main symptom, the possibility of sannipatajvara was also examined. It was found that many general features of sannipatajvara can be seen in COVID-19. Fever, cough, breathing difficulty, headache, sore throat, anorexia, confusion, hemoptysis, arthralgia, conjunctivitis, delirium, sleep disturbances, seizures, dizziness, abnormal breath sounds, fatigue, oral thrush, thirst, dehydration and reduced output of urine, affliction of heart, skin rashes, loss of speech, deviated eyes, inflammation of nasal and respiratory passages and delay of dosha paka are symptoms of sannipatajvara [10]. Sannipatajvara becomes incurable or difficult to manage if the dosha does not undergo paka (doshe vibaddhe) due to dysfunction of agni (agnau nashte) and if the full range of symptoms manifest (sarvasampurnalakshana). Even if patients recover, there are chances of residual disabilities (vaikalya) [11]. According to Sushruta samhita, sannipatajvara typically runs a mild or moderate course for one or two weeks or even more and then becomes severe and the patient either recovers from the crisis or dies [12]. COVID-19 can turn severe after

running mild to moderate course. When it turns critical, mortality is high and even if patients recover residual disabilities have been reported.

As discussed earlier, an unlisted disease can be studied by analysis of nidana (etiology), dosha and dushya.

Nidana (etiology)

As pointed out earlier, bhutabhishāṅga by vishakrami is a very plausible understanding of the nidana or etiology of COVID-19 from the Ayurveda viewpoint. Bala is a broad term that includes agnibala (strength of digestive and metabolic processes), dhatubala (strength of body elements) and dehabala (strength of body). Ojas is the byproduct of metabolic processes taking place in all the dhatu [13]. The bala of the body is primarily dependent on ojas [14]. Fever persists only in the absence of dehabala and dhatubala [15]. The dhatu involved in COVID-19 can be tentatively considered as rasa and rakta.

Purvarupa (prodromal symptoms)

Acharya Madhava said in his book Madhava Nidanam first chapter that symptoms that do not give a clear indication of a dosha imbalance can be classified as purvarupa [Ma. Ni. 1/5-6]. Since fever is the most common symptom of COVID-19, presentation of symptoms without fever can also be considered as the prodromal stage of the disease.

Rupa (symptoms)

The key symptoms of COVID-19 are fever (jvara), cough (kasa) and shortness of breath (shvasa), which points to vata-kapha dominance. Association of pitta related symptoms and clinical course described earlier indicate that COVID-19 is a type of sannipatajvara.

Upashaya (therapeutic response)

Ayurveda clinical studies need to be conducted to elicit the upashaya (positive) or anupashaya (negative) response to confirm the provisional assessment of dosha imbalance and other Ayurveda parameters [16].

Samprapti (pathogenesis)

Sankhya samprapti- COVID-19 is understood as a single disease. Vikalpa samprapti- a dominance of vata and kapha accompanied by mild degree of pitta is seen in the presentation and clinical course of the disease. Pradhanya samprapti- COVID-19 is an

independent disease (svatantra vyadhi) though it can worsen in the presence of pre-existing co-morbidities.

Shatkriyakala (clinical course of the disease)

1, 2, 3. The Chaya, Prakopa and Prasara

The Chaya, Prakopa and Prasara stages are difficult to distinguish in an agantu disease. Loss of smell and taste, sore throat, diarrhea, and such non-specific symptoms have been reported as the only presenting signs of COVID-19 infection. Being the agantu phase of pathogenesis, dosha specific symptoms will not be seen.

4. The Stage of Sthanasamsraya.

The Stage of Sthanasamsraya is the stage in which the prodromal symptoms (purvarupa) are manifesting. This stage is not well demarcated in available clinical documentation of COVID-19. Certain presentations with mild symptoms could be potentially classified as the stage of purvarupa but extensive clinical studies are required for a clear understanding.

5. The Stage of Vyakti

The Stage of Vyakti is the symptomatic stage of the disease, which can be mild to moderate or severe.

6. The Stage of Bheda

The Stage of Bheda represents the complications of COVID-19, which is characterized as the critical stage with severe pneumonia, ARDS and hypoxia. This stage of COVID-19 is associated with higher rate of mortality.

MATERIAL & METHODS

In this article, attempt is done to highlight the knowledge and practices from Ayurveda that might be effectively utilized in the prophylaxis and adjuvant therapy of COVID-19. While we focus here on prophylaxis and the protection of vulnerable target organs, Ayurveda as an add-on therapy may support patients of COVID-19 by improving the quality of standard care. A detailed chapter on Janapadodhwansa in Charak Samhita Vimansthana 3rd chapter explains epidemic disease and its etiological factors. In Sushrutsamhita Kushthanidanadhyaya there is a good description on mode of transfer of disease. They are called Aupasargika roga (Communicable diseases). From these references we come to know that in ancient time also there were such epidemics. Acharya Charaka

has mentioned Adharma as the root cause of Janapadodhwansa. Not following one's duty to a community is termed as adharma. Pradnyaparadha is also included in it. Not following Dincharya (daily regimen), ritucharya (seasonal regimen), vegavidharana (suppression of urges), paapakarma (sins) is included in Adharma. All these things are responsible for hampering immunity of an individual. Thus, not directly but surely Adharma is responsible for Janapadodhwansa.

In Sushrut Samhita Nidana sthana Adhyaya 4th Kushthnidanadhyaya, Acharya Sushruta has mentioned Aupasargika roga. They are contagious diseases which spread through direct contact or contaminated objects of patient. By physical contact, expired air, eating with others in same plate, sharing bed (sexual contact also) using clothes, garlands, and paste (anulepa or cosmetics) infectious diseases spread from person to person. Meaning of Prasanga is excessively and frequently performed according to Acharya Dalhana.

This article complements the guidelines issued by Ministry of AYUSH, Government of India for boosting immunity among the masses [17]. However, it is not limited to prophylaxis alone. It addresses the therapeutic domain as well although within an integrative model of care. In that context, at a generic level, key criteria for choosing suggested Ayurveda medicines here have been safety and potential efficacy, broad-spectrum applicability, ease of availability, long-term experiential knowledge on clinical use, ease of administration, and as far as possible, affordability [18]. Unexposed asymptomatic people may be the most suitable for building of immunity so that infection-related pathogenesis can be countered to keep them healthy [19]. Preventive interventions here can include both pharmacological as well as nonpharmacological strategies.

Among the non-pharmacological interventions' healthy lifestyles, adequate physical activity, sufficient sleep, care of retainable and non-retainable urges, sadvritta (good conducts), and avoidance and isolation from infected persons are vital [20]. Fumigation of homes, shelters and living place by Ayurveda herbs such as garlic (*Allium sativum*) peel, turmeric (*Curcuma longa*) powder, Carom or Ajwain (*Trachyspermum ammi*) seeds and Loban (resin of *Styrax benzoin* and *Boswellia* species) may also be a useful strategy for disinfection [21]. In addition,

community based Swarna Prashana [22] and mass prophylaxis through Rasayana having the predominant effects upon respiratory tract can be useful [23]. Rasayana may include Brahma Rasayana, Chyavanprasha or Amrit Bhallataka [24, 25]. The rationale for choice of Rasayana drugs can be traced back to Samhita classics of Ayurveda as well as in contemporary research. Rasayana act as antioxidant, anti-stress, anti-inflammatory, anti-microbial, vaccine adjuvant, and confer immunity against diseases [26, 27]. Further, according to Ayurveda classics, Rasayana therapy [28], along with physical and social distancing from infected persons [29], constitute a core strategy to overcome epidemic and infectious diseases. Building immunity requires time. There may be some asymptomatic carriers who could transmit the virus to other apparently healthy people. Hence, physical and social distancing for all would be essential to avoid any transmission.

Ayurveda concept of immunity (Bala or strength) is classified as natural (Sahaja), chronobiologic (Kalaja), and acquired (Yuktikrut). The eyes, nose, and mouth are the main portals of entry of droplets carrying the SARS-COV-2. Ayurveda classics mention several interventions that are likely to target these entry portals such as consumption of hot water, hot food, and herbal decoctions, gargling with medicated water, steam inhalation, and local applications may be helpful for symptomatic relief in mild cases. The oils or oily decoctions clean the oral cavity, pharynx, and tonsillar area and are likely to coat the mucosa as biofilm and induce additional immunomodulatory, antioxidant, and antimicrobial benefits [30]. Turmeric (*Curcuma longa*) rhizome, Yashtimadhu or liquorice (*Glycyrrhiza glabra*) stem, Neem (*Azadiracta indica*) and catechu (*Acacia arabica*) barks, and natural salt may be used to prepare medicated water/solutions for gargles/mouth rinse.

Several studies have endorsed the role of Yoga breathing techniques (pranayama), postures (Asana), and procedures (yogic kriya) in improving lung health and exercise tolerance [31, 32]. The recommended daily diet includes fresh hot soups of vegetables (radish, trigonella leaves, drumstick vegetable pods) and pulses (lentils, green gram/munga beans, chickpeas) seasoned with spices such as ginger (*Zingiber officinale*), garlic (*Allium sativum*), cumin seeds (*Cuminum cyminum*), and mustard (*Brassica nigra*) seeds (black whole mustard).

Several Rasayana botanicals described in Ayurveda are used in clinical practice for strengthening immunity i.e., *Withania somnifera* (Ashwagandha), *Tinospora cordifolia* (Guduchi), *Asparagus racemosus* (Shatavari), *Phyllanthus embelica* (Amalaki), and *Glyceriza glabra* (Yashtimadhu) are potential immune modulators. Such Rasayana botanicals may be considered for COVID-19 prophylaxis and as an add-on treatment. Meditation is found to reduce inflammation markers and influence markers of virus-specific immune response [33]. Yoga including meditation could be a simple and useful home-based practice for the prevention and post-recovery management of COVID-19.

Aachara Rasayana and Sadvrittapalana i.e. truth, sympathy, respecting elders and teachers, helping needy people, eating nutritious and Satvika ahara e.g. milk, ghee etc. in daily food will benefit the person in the same way as that of consuming Rasayana. Hence it is called AcharaRasayana. Along with this regimen treatment of symptoms as per mentioned in chikitsasthana can be done.

RESULTS & DISCUSSION

Modern medical care and health systems are being tested to the hilt for effective management of COVID-19. However, there are several gaps. We must remember the basic principle in medicine that “prevention is better than cure.” The Ministry of AYUSH, Government of India, has already issued a very useful advisory in this context [34]. Noticeably, these interventions have the advantages of simplicity, affordability, and acceptability and appear promising as feasible measures for large-scale implementation. Ayurveda, Yoga, and meditation have a potential role to engage the community in creating a more positive health environment.

The review of the classical Ayurveda literature suggests that a careful analysis of the descriptions of sannipatajvara and correlation with the modern clinical profile of COVID-19 will be helpful in understanding whether this disease can be classified within the generic categorizations of jvara in Ayurveda.

CONCLUSION

Based on review of classical Ayurveda literature, it is suggested that COVID-19 can be classified as

agantuka jvara with a vatakapha pradhana sannipata presentation. From the above discussion it can be concluded that ancient acharya had knowledge of communicable diseases that's why a thorough description is given in Samhita regarding them. Treatment of patients not showing fatal signs is given as Panchakarma and use of Rasayana as mainstream treatment. Thus, by improving immunity of individuals spread of communicable diseases can be controlled. Further research should be done in order to implement Ayurveda against infectious diseases, in Public health for worldwide acceptance of Ayurveda.

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