

REVIEW OF ENTITIES IN COVID -19 AND ITS RELEVANCE WITH RACHANA SHARIR

Dr. Kiran Anant Neman*¹ and Dr. Sarika Chopde²

¹MD Scholar, Tilak Ayurved Mahavidyalaya, Pune.

²Associate Professor, Tilak Ayurved Mahavidyalaya, Pune.

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***Corresponding Author**

Dr. Kiran Anant Neman

MD Scholar, Tilak Ayurved
Mahavidyalaya, Pune.

ABSTRACT

A disease which has struck globally, India reported over 626 thousand cases of the coronavirus (COVID-19) as of July 3 2020, with increasing mortality rate. WHO, official names have been announced for the virus responsible for COVID-19 (previously known as “2019 novel coronavirus”) and the disease it causes, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Ayurveda has given a detailed description of disease which spread through contact, droplet and usage of objects of infected person known as *Sansargajanya roga*. Similar to the present scenario of covid 19, which explains the spread

of this virus. Another concept of *janapadodwamsa*, explains the origin of pandemic diseases. Entities which are affected by covid require a detailed harnessing from the knowledge available. So as to draw an overall dimension of *sharir bhava* and covid spread in various systems according to Ayurveda. Being the *pranvahastrotas* affected severely in this acute respiratory syndrome, also other entities such as *hriday*, *yakrut*, *vrukka*, *rakta vahastrotas*, *sleshmadharakala*, *oja* should be studied in detail. Understanding about *dosha-dushya samurchana*, which can lead to an outline helpful for the treatment of covid. This is a literary study which focuses on *sharir bhavas* and its relevance in covid 19 disease.

KEYWORDS: Covid 19-Ayurvedic perspective, *sharir bhava*, anatomy, infectious disease etc.

INTRODUCTION

Corona virus has become a rising issue since the month of December 2019. Pneumonia outbreak was reported in Wuhan, China by the WHO; later renamed SARS-CoV-2. *Acharya*

Charak in Viman sthan 3, explains about *janapadodhawansa* which likely can be co-related to the present pandemic of covid -19. *Pradnyaparadh* is the reason for *Adharma*.^[1]

Prasangat Gatra Sansparshantnishwasatsahabhojanat/

Sahashayya satachapi Vastramalyanulepanat //

A brief discussion of *Aupsargika roga* by *Acharya Sushrut* (*SU.NI.5/33*) is the best example of how the diseases spreads and what should be avoided. *Prasangat-* conjugation, *gatrasanparshat-* contact, *niswasat-* droplet, *sahabhojanat-* eating together, *sahasayyasna-* sleeping and sitting together, *vastramalyanulepanat* - using infected ornamentation.^[2]

Acharya Charak (*CH.SU 18/ 44,45*) explains that it not necessary that all the diseases have a name but, by understanding the *dosha dushya samurcha* one can treat the disease.^[3] A comprehensive research is unavailable and an Ayurvedic perspective of covid -19 is not been carried out yet. The general symptoms of Corona virus are sore throat, running nose, headache, fever and potential complication pneumonia, acute respiratory syndrome, kidney failure. This is a literary study to understand *sharir bhavaas* involved in Covid 19. Pertaining to the current situation, the knowledge of applied anatomy behind the derangement of *sharir bhavas* which has been caused by corona virus infection will be studied.

MATERIALS AND METHODS

1. Ayurvedic texts *Sushrut samhita*, *Charak samhita* will be referred along with the respective commentaries (*Nibandhasangraha*, *Ayurveda dipika* etc).
2. Modern literature (B.D.C Human Anatomy, Greys Anatomy etc).
3. Use of internet- Wikipedia, magazine, review articles, periodical journals, online research portal all data will be studied and analysed, evaluated and justified.

Review of literature

Acharya Susrut in (*SU.CHI. 2/12,13*) has explained about organs which are present in the *kostha*.

Which includes the major gastro – intestinal tract, along with the organs viz *amashaya*, *agni ashaya*, *pakwashaya*, *rudhirashaya*, *hriday*, *unduka*, *phuphussa*.^[4]

Stanani aammagni pakvanam murtasya rudhirasyacha//

Hrudundukaphuphussascha kostha ityaabhidhiyate //

As per the recent researches it is been found that the major organs deranged in Covid -19 are lungs, heart, kidneys and brain^[5]

Effected organs	Anatomical, systemic derangement seen
Lungs	The lungs are the organs most affected by COVID-19 because the virus accesses host cells via the enzyme angiotensin-converting enzyme 2 (ACE2), which is most abundant in type II alveolar cells of the lungs. As the alveolar disease progresses, respiratory failure might develop and death may follow. Single or multifocal Ground glass opacity, patchy consolidate opacities, pulmonary nodules encircled by GGO and air bronchogram.
Heart	Acute infection can lead to atherosclerotic plaque instability and myocardial injury, increasing the risk of acute myocardial infarction. Still exact effects are unknown.
Kidneys	Although the exact pathogenesis of kidney involvement in COVID-19 infection is unclear, it is reported that AKI in COVID-19 accompanies sepsis, multiorgan failure and shock, suggesting the cause of AKI to be acute tubular necrosis
Liver	Mild and transient liver injury, as well as severe liver damage can occur in COVID-19
Immunity system	The immune response is undeniably one of the key determiners of the susceptibility and severity of the disease. While weakened immune system can increase the risk of severe COVID-19, hyperinflammatory response to the infection can be responsible for the commonly seen complications by causing organ damage.

Ayurvedic concepts pertaining to covid -19 infection

- **Dosha sambandha:** *pranvayu, udan, vyan, sadhak pitta, avalambak kapha.*
- **Vayu Sambandha** - According to Acharya Sharangdhar (*Pra.Kha.5/39*), it is the *sthan* of *udan vayu*, the *dosha dushya samurchana* takes place in the *phupusa* which is the entry point of covid -19 in the circulation by causing patchy consolidative opacities, reticular opacities.^[6]
- **Kapha sambandha** – *kapha* plays an important role as it is present in the mucosal lining of each organ. Also is responsible for maintaining the *bala*.
- **Dhatu-** *rasa, rakta mamsa, shukra, ooja.*
- **Rakta Dhatu** - Acharya Shusrut in (*SU.SU.14/9*) “*visrata dravata raag sapndanam laghuta tatha. Bhumyadinam guno hyete drushyate chatra shonite.*”^[7] Explains about the *prakrut roopa* of *rakta dhatu* and if it is vitiated causes loss of its properties *visrata and dravata*.

➤ **Strotas sambandha**

1. Pranvaha Strotas- In covid the main reason is deterioration of breathing capacity causing acute respiratory distress syndrome. The dilatation and congestion of the alveolar septal capillary, interlobular interstitial edema and exudation of fluid in alveolar cavity is the reason behind. In the same way Acharya Charak explains the *pranvaha strotas dusti lakshan* (CH. VI.5/8) “*atisrusta atibadham kupitam alpaalpamabhikshanam va sashabdashuloolamuvasantam.*”^[8] which is found in covid. Also due to the *vidha* (“*tatra vidhasyaakrosha vinaman mohana bhraman vepannani maranam.*”)^[9] (SU.SHA 9/12). Symptoms seen due to *dusti* of *pranvaha strotas* - breathlessness, cough, respiratory distress.

2. Rasa Vaha Strotas - As there is involvement of *rasa vaha strotas* “*ashraddha aruchi asya vairasya arasajnyata. hrullaso gauravam tandra sangamardo jwarastama* CH. SU. 28/9)^[10] loss of appetite, loss of taste, nausea, heaviness, dizziness, body pain and fever all these symptoms are seen in covid infection.

3. Rakta Vaha Strotas - Close relationship of the *rakta vaha strotas* is present as there involvement of *yakrut* and *pleeha* as it is *moolasthan*.^[11] (CH.VI 5/8).

➤ **Avayava sambandha**

- **Phuppusa- Utpatti** - As per *Sushruth sharir* 4/24, it is formed from the *phena of rakta*.^[12]
- **Hridaya**
 - **Utpatti of hriday-** According to (SU.SHA 4/31) it is formed from *rakta* and *kapha prasad bhag*.^[13]
 - Being the *mula stan* of *rasa vaha strotas*, *hridaya* seat of *prana*, *chetana* is of utmost importance.
 - It is widely agreed that COVID-19 can also have adverse effects on cardiovascular health itself, causing or aggravating damage to the heart.
- **Yakrut**
 - **Utpatti** is from the *rakta*.^[14]
 - And in covid there is blood clots which are formed which results in the thickening of blood. Blood clots are ‘consumptive’, in that the explosive coagulation reaction consumes free soluble coagulation proteins by incorporating them into the growing clot, lowering their concentration in the circulation^[15] (<https://europepmc.org/>)
 - **Liver And Covid** - Mild and transient liver injury, as well as severe liver damage can occur in COVID-19.

▪ **Vrukka**

- *Utpatti “rakta meda prasadaat vrukkau”^[16](SU.SH 4/31) of vrukka itself there is involment of meda and rakta.*
- Kidneys being the main organ for blood purification. The virus itself infects the cells of the kidney. Kidney cells have receptors that enable the new corona virus to attach to them, invade, and make copies of itself, potentially damaging those tissues.
- **Marma and pranayatan**- type of *sira, sadhyapranhara marma*. As per *Charak* one among *trimarma and dashapranayatan. Stan of chetana*.
- **Kala sambandha** -
- **Sleshmadhara kala** - the main karma of *sleshmadhara kala* is avoiding the *gharshan* between the *dhatu*s and the *ashayas*. Same way due to the bronchial wall thickening and interlobular septal thickening, it causes damage to the mucosal lining.
- **Role Of Oja** - as there is a decreasing trend seen in *vyadhikshamatva* of the patient *ojaa* present at the *hridaya* and *sarvadehik oja* plays a vital role.
- **Vyadhikshamatva Mahatva**- although the above said entities are involved *vyadhi ksmatva* is the major concept of concern. Immunity which depends on the *bala, oja*. *Vyadhibalavirodhatvam*- Capacity of the body to fight against the manifested diseases (natural immunity) and *Vyadhiutpadpratibandhkatvam*- Capacity of the body to not allow to produce disease or pathogenesis.

RESULT

From the above explanation it can be interpreted that the major organ which is affected in covid 19 are lungs, heart, kidneys, liver along with the systemic involvement of respiratory, cardiovascular and renal system. From the Ayurvedic perspective the entities which has to be examined *rakta* majorly, *pranvahastrotas, sleshmadhara kala, hridaya, rakta vaha strotas* etc. Along with the *dosha dushya samurchana* specific medication can be given on the basis of purified knowledge of *sharir bhavas*.

DISCUSSION

Understanding the various organs effected in covid 19 and also the *Ayurvedokta sharir bhavas*, a simultaneous attempt can be made to understand its pathogenesis. The virus first effecting the *phupussa* and the altering the *sleshmadhara kala* which is responsible for *snehan* and reducing the friction between two entities. As a result there is *shuska kasa*,

pranvaha strotas dusti atistusta, abhikshana swasa. And of *vata* and *kapha* leading to *ama*, with *rasa dusti* hence there is *ashraddha, aruchi*. *Rakta dhatu dusti* as there is loss of *visrata* and *dravata* leading to clots formation which may end into pulmonary embolism. *Krumi vichar* can also be considered from *chikitsa* point of view as *nidan parivarjan* and *prakruti vighat* can form the basis of first line treatment.

CONCLUSION

Hence covid disease a pandemic effecting the various organs can be treated by keeping the sharir bhavas as the ground of treatment. Acharyas have already given the *dosha, dusya lakshanas*, the *sharir* of each organ, with its *prakrut* and *vikrut karma*. The concept of *koshta, ashaya, kala, oja, vyadhiskmatva, krumi, ama* are all involved in understanding covid. *Rakta* seems to be the *dusya* which is being vitiated. *Rasa and kapha* both are important from the treatment point of view as it helps in building immunity. *Rasa* as *dusya* and *mala* of *kapha* in both ways should be understood. Drugs acting on *rasa rakta dhatu* should be principally used. Even though *Pranvaha strotas* is considered as respiratory system, but with that GIT also should be examined as it is its *moolasthan*. Therefore if as Ayurvedic practitioner if we engulf all these concepts we can make an attempt towards “*prayojanam chasya swasthasya swaastha rakshanam aaturasyavikara prasamanam cha*.”^[17] (CH. SU 30/26).

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