



GOVERNMENT AYURVEDA RESEARCH CENTRE

K.R.S. ROAD

MYSORE



REPORT OF COVID-19 PROJECT

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಸರ್ಕಾರಿ ಆಯುರ್ವೇದ ಸಂಶೋಧನಾ ಕೇಂದ್ರ,
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ಸಂಖ್ಯೆ:ಸಆಸಂಕೇ/ಸಿಬ್ಬಂದಿ(1)/ /2019-20

ದಿನಾಂಕ:09-04-2020

ಗೆ,

ಆಯುಕ್ತರು

ಆಯುಷ್ ನಿರ್ದೇಶನಾಲಯ

ಧನ್ವಂತರಿ ರಸ್ತೆ

ಬೆಂಗಳೂರು.


ಮಾನ್ಯರೇ,

ವಿಷಯ:ಕೊರೊನಾ (COVID-19) ಬಗ್ಗೆ ಆಯುರ್ವೇದ ಪದ್ಧತಿಯಲ್ಲಿ Literary
Review ಮಾಡಲು ನೇಮಿಸಿರುವ ತಜ್ಞರ ಸಮಿತಿಯು ನೀಡಿರುವ ಎಲ್ಲಾ
Protocol ಗಳನ್ನು ಸಲ್ಲಿಸುವ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: ಆಯುಷ್ ನಿರ್ದೇಶನಾಲಯದ ಪತ್ರ ಸಂಖ್ಯೆ:ಆಯುಷ್/ಸಿ(3)/ಕೊರೊನಾ/101/
2019-20 ದಿನಾಂಕ:30-03-2020

ಈ ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ದಿನಾಂಕ:30-03-2020ರಂದು
(COVID-19) ಬಗ್ಗೆ ಆಯುರ್ವೇದ ಪದ್ಧತಿಯಲ್ಲಿ Literary Review ಮಾಡಲು ನೇಮಿಸಿರುವ
ಸಮಿತಿಯ ತಜ್ಞರು ನೀಡಿದ ಎಲ್ಲಾ Protocol ಗಳನ್ನು ಒಂದು ಪುಸ್ತಕ ರೂಪದಲ್ಲಿ ಕ್ರೋಢೀಕರಿಸಿ ಹಾಗೂ
ಪ್ರತಿ Protocol ನ ಸಂಕ್ಷಿಪ್ತ ರೂಪದ ಮಾಹಿತಿಯನ್ನು ಈ ಪುಸ್ತಕದಲ್ಲಿ ನೀಡಲಾಗಿದೆ. ಈ Protocol ಗಳ
ಎಲ್ಲಾ ಅಂಶಗಳನ್ನು ಕ್ರೋಢೀಕರಿಸಿ Compendium ಅನ್ನು ತಯಾರಿಸಿದ್ದು, ಮತ್ತು Model Protocol
ಅನ್ನು ಸಹ ತಯಾರಿಸಿದ್ದು, ಅದನ್ನು ಸಹ ಶೀಘ್ರದಲ್ಲಿ ತಮ್ಮ ಅವಗಾಹನೆಗಾಗಿ ಸಲ್ಲಿಸಲಾಗುವುದು.ತಾವು
ದಯಮಾಡಿ ಇದನ್ನು ಸ್ವೀಕರಿಸಬೇಕಾಗಿ ಕೇಳಿಕೊಳ್ಳುತ್ತೇನೆ.

ತಮ್ಮ ವಿಶ್ವಾಸಿ


ಸಹಾಯಕ ನಿರ್ದೇಶಕರು ರೀಸರ್ಚ್
ಸರ್ಕಾರಿ ಆಯುರ್ವೇದ ಸಂಶೋಧನಾ ಕೇಂದ್ರ
ಮೈಸೂರು

SL. NO	INDEX	PAGE NO
01	FROM THE CHAIRMAN'S DESK	01-02
02	FOREWORD	03
03	PROTOCOL DEVELOPED BY DR.VENKATA KRISHNA	04-16
04	PROTOCOL DEVELOPED BY DR.ANANDA KATTI	17-20
05	PROTOCOL DEVELOPED BY DR.SHIVALINGAPPA J ARAKERE	21-31
06	PROTOCOL DEVELOPED BY DR.A.S.PRASHANTH	32-64
07	PROTOCOL DEVELOPED BY DR.NAGARAJ PUJARI	65-87
08	PROTOCOL DEVELOPED BY DR.SANTHOSH BELVADI	88-120
09	PROTOCOL DEVELOPED BY DR.RAGHAVENDRA NAIK	121-139
10	PROTOCOL DEVELOPED BY DR.JAGADESH YAJJI	140-148
11	PROTOCOL DEVELOPED BY DR.SRINIVAS ODEYAR	149-167
12	PROTOCOL DEVELOPED BY DR.SARBESWAR KAR	168-192
13	HIGHLIGHTS OF ALL PROTOCOLS	193-203

FROM CHAIRMAN'S DESK

1. COVID 19 IS A MILD TO SEVERE RESPIRATORY ILLNESS , CAUSED BY A CORONA VIRUS (THIS VIRUS AND OTHER PATHOGENIC ORGANISMS TO BE DISCOVERED IN FUTURE ARE COVERED UNDER *BHOOTA* OF *CHARAKOKTA JWARA CHIKITSA*). IT IS TRANSMITTED BY CONTACT WITH INFECTIOUS MATERIAL (CONCEPT OF *OUPASARGIKA ROGA*).SO AS PER THE CONCEPT OF "*SANKSHEPATAH KRIYAYOGO NIDANAPARIVARJANAM*" , WE OUGHT TO MAINTAIN THE SOCIAL DISTANCE.

2. THIS DISEASE HAS *ADHARMA, PRAGNYAPARADHA, VATA-JALA DUSHTI* AS PER THE *JANPADODHWANSA* ONCEPTS. IT CAN BE TACKLED BY SUITABLE *PANCHAKARMA* (BIO-PURIFIATION), *RASAYANAS* (WHICH GIVE BLANKET-IMMUNITY), FOLLOWING PRINCIPLES OF *ACHARA RASAYANA*. THE *RASAYANAS* FOLLOWED AS PER *YUKTI DO* IMMUNO-MODULATION, BEGET *PRASHASTA RASA RAKTADI DHATUS*, GIVE *VYADHI BALA VIRODHITWA* EFFECT (RETARD THE PROGRESS OF DISEASE).*PANCHAKARMAS* IN THE MODIFIED FORM ELIMINATE UNWANTED MATERIAL FROM THE BODY. *RASAYANAS*, AS SUCH ARE INDICATED, BY CLASSICS IN 3 CONDITIONS:-

a. BEFORE THE ONSET OF THE DISEASE(FOR PREVENTION PURPOSE)

b. DURING THE DISEASE CONDITION WITH NECESSARY SUPPORT FROM ALL THE SYSTEMS OF MEDICINES USED IN SYNERGISTIC AND COMPLIMENTARY MANNER. HERE THE RESEARCHES OF B.H.U. , WHEN *CHYAVANPRASHA* WAS USED WITH ANTI TUBARCULAR DRUGS CAN BE REMEMBERED. TOXICITY OF ALLOPATHIC DRUGS IS REDUCED.PATIENTS RESISTANT TO ALLOPATHIC DRUGS RESPONDED BETTER. HERE *POTTALLI KALPAS* CAN BE SERIOUSLY THOUGHT.

c. AFTER THE RECOVERY FROM DISEASE FOR IMPROVING *AGNI, DHATU* AND *BALA* ETC.

3. IN QUARANTINE PERIOD, *DAIVA VYAPASHRAYA, YUKTI VYAPASHRAYA*, AND *SATWAVAJAYA* FOLLOWED AS PER THE PATIENT'S FAITH ARE GOOD. *AMAPACHANA* AND *RASAYANA DRAVYAS* INCREASE *VIKARA VIGHATKARA BHAVA*. A PLANNED DIET LIKE *MUDGA-AMALAKA YUSHA* WITH SUFFICIENT *DADIMA* IS GOOD. OTHER *DEEPANIYA YUSHAS, YAVAGU, DHANYAKA SIDDHA JALA* FOR *PAANA*. FOLLOWING PRINCIPLES OF *USHNODAKA PANA* AS TOLD IN *JWARA PRAKARANA* WILL AMELIORATE THE SYMPTOMS AND REDUCE THE INTENSITY OF THE DISEASE. FOR GIVING *DRAVA DRAVYAS* TO THE SUBJECT, VESSELS INDICATED IN "*TODARA SOUKHYA*" CAN BE FOLLOWED.


4. *PRANAVAHA SROTAS* IS MAINLY INVOLVED IN MANY SYMPTOMATIC PATIENTS. WHEN *PRANAVAHA SROTAS* IS INVOLVED WE SHOULD FOLLOW " *SHWASKI KRIYA*". STRICT FOLLOWING OF RASAYANA RULES WILL GIVE SYMPTOMATIC RELIEF AND QUICK RESTORATION OF HEALTH.

5. TWO DECADES AGO, DURING OUTBREAK OF *ROMANTIKA* IN METAGALLI AN EXTENSION OF MYSORE, " *AMRUTA VATT*" PREPARED FROM *SHUNTHI* AND *JAMBIRA RASA* HAS GIVEN GOOD RESULTS. THIS WAS APPRECIATED BY ALL THE DOCTORS. IN THE PRESENT SCENARIO ALSO *ARKA* PREPARATION/ALKALINE WATERS LIKE *KANGAN WATER* MAY BE IDEAL.

THIS IS A GLOBAL EMERGENCY." *VAIDYASAMUHO NIHSAMSHAYAKARANAM*". HERE MOST FAMOUS, "WHO-IS-WHO" IN THE FIELD OF *AYURVEDA* HAVE WORKED SYNERGISTICALLY AND HAVE COME OUT WITH MAXIMUM EFFECTIVE REMEDIES FROM REPUTED CLASSICAL TEXTS LIKE " *SIDDHA BHAISHAJYA MANIMALA*". THERE ARE EQUALLY EFFECTIVE OTHER MEDICINES WHICH HAVE BEEN EXPOUNDED IN LOGICAL MANNER. SO I HOPE AND SEE A GOLDEN-DAWN IN THE HEALTH SCENARIO BY THE COLLECTIVE EFFORTS OF *PRANABHISARA VAIDYAS*.

MY SALUTATIONS AT THE FEET OF ALL *APTAS*




Dr. ANJANEYA MURTHY N.
B.Sc., B.S.A.M., M.D.(AYU) F.I.C.A.(USA)

(Former Joint Director, Dept. of AYUSH,
Chairperson, COVID-19 Protocol Review Committee)

Foreword

Department of Ayush, Government of Karnataka has Given us an Oppourtunity to draft the protocol for COVID-19,for which the committee is formed by honourable commissioner Meenakshi Negi madam on March 23rd 2020. The Objective of this committe is to find suitable Remedies for COVID-19, Based on Literary review from the classics of Ayurveda. The committe members have given their opinion in a Protocol Form based on literary review. All the protocols are well designed and Logical analysis is done with the Clinical inputs. Ayurveda research centre decided to keep this Document in a book form because each document is unique with the special emphasis on clinical experience and some of the concepts are really thought provoking. Hence it is mandatory for us to protect this document in a book form for better understanding COVID-19 in multi dimensions. And this document may help future researches as a secondary data document for their research work.

I thank Dr.Anjaneya Murthy, Chairman of this committe who dedicated himself with enthusiasm & helped us to make our dream of achieving this task in time. I thank Dr.Venkata Krishna, Dr.Ananda Katti , Dr.Shivalingappa J arakeri, Dr.A.S.Prashanth, Dr.Nagraj Poojari, Dr.Santhosh Belvadi, Dr.Raghavendra Naik, Dr.Jagadeesh yajji , Dr.Srinivas Odeyar, Dr.Sarbeswar Kar for their practically oriented Classically referred wonderful documents submitted in time. Each document is a Treasured document with thought provoking protocols aimed at combating COVID-19 with ease. For all this, protocol validation is needed with Clinical Trial so that this protocol can be justified with the suitable research process. I thank all Post Graduate Student of GAMC, Mysuru, Dr. Vasudeva chate, Associate Professor GAMC,Mysuru for their support, Guidance & cooperation. I thank our Commisioner Meenakshi Negi, IFS, for giving us an oppourtunity to draft the protocol for COVID-19. I also Thank all the employees of Government Ayurveda Research Centre for their Support. Finally I dedicate this protocol to all committee members who made our task easy with their valuable inputs.

Dr.Lakshmi Narayana Shenoy
Assistant Director

Ayurveda Research centre,Mysuru
Member secretary COVID-19 committe

***PROTOCOL DEVELOPED BY
DR. VENKATA KRISHNA***

From

Dr. Venkatakrisna K. V.

Professor & Head

Dept. of PG Studies in Swasthavritta

GAMC & H, Mysuru

To,

Commissioner,

Directorate of AYUSH,

Dhanwantari Road, Bangalore,

Through

Proper channel

Sir,

Sub: With reference to the letter

1. Dated 30.03.2020 No. AYUSH/c(3) CORONA/101/2019-20
2. Dated 30.03.2020 Ayurveda research centre, Mysuru

Here by submitting the detailed draft of Diet & yoga protocols for COVID -19 Pandemic – Draft. Please go through and necessary corrections may be done.

Diet & yoga protocols for COVID -19 Pandemic - Draft

Ayurveda emphasises the importance to maintenance of health of a healthy person and curing the disease of an ill. To maintain the health some activities are mentioned in Ayurveda under the term 'Dinacharya', 'Ritucharya' & 'Sadavritta'. By following these one will be able to follow a healthy lifestyle thereby maintaining health.

Yoga means 'union', a union of the mind, body, and soul. It is about the present, self-awareness, peace of mind, self-healing, self-realization, detoxification of body, self-discovery, and overall well being. Yoga is about 'you', yoga is for all and one. One of the oldest forms of yoga is Ashtanga Yoga which comprises Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana & Samadhi. Among these first 5 are called bahiranga yoga & last 3 are called antarangayoga.

Ahara is considered as *Mahabhaishajya* (the superior medicine). Various life style disorders and numerous diseases occur due to faulty dietary habits which may be prevented by proper *Ahara* and eating habits. *Hitakara/Pathya* food (Wholesome food) as per Ayurveda is conducive for the maintenance of good health, longevity, strength, intellect, good voice and complexion. For a disease free life, Ayurveda emphasizes on the importance of proper nutrition through intake of food by appropriate food choices, food

combination, and cooking methods, in right quantity which gets digested as well as metabolised in time. *The time, season and place for the food intake are also important.* It is advised to refrain from *Ahitakara Ahara* (unwholesome food).

Diet & Yoga protocol for COVID 19(or any other epidemic) can be formulated based on the principles like this

Sutra Supporting Importance of Kala/Ritu & Seasonal cleansing

1. कालो हि नाम (भगवान्) स्वयम्भुरनादिमध्यनिधनः ।
अत्र रसव्यापत्सम्पत्ती जीवितमरणे च मनुष्याणामायत्ते |Su. Su. 6/3
2. ता एवौषधयः कालपरिणामात् परिणतवीर्या बलवत्यो हेमन्ते भवन्त्यापश्च प्रशान्ताः स्निग्धा अत्यर्थं गुर्व्याश्च,
ता उपयुज्यमाना मन्दकिरणत्वाद्भ्रानोः सतुषारपवनोपस्तम्भितदेहानां देहिनामविदग्धाः
स्नेहाच्छैत्याद्गौरवादुपलेपाच्च श्लेष्मसञ्चयमापादयन्ति; स सञ्चयो वसन्तेऽर्करश्मिप्रविलायित ईषत्तब्धदेहानां
देहिनां श्लेष्मिकान् व्याधीञ्जनयति |Su. Su. 6/11
3. तत्र वर्षाहेमन्तग्रीष्मेषु सञ्चितानां दोषाणां शरद्वसन्तप्रावृट्सु च प्रकुपितानां निर्हरणं कर्तव्यम् || Su. Su. 6/12

Sutra Supporting Vyapanna Ritu

1. तेषां पुनर्व्यापदोऽदृष्टकारिताः; शीतोष्णवातवर्षाणि खलु विपरीतान्योषधीर्व्यापादयन्त्यपश्च || Su. Su. 6/16
2. तासामुपयोगाद्विधिरोगप्रादुर्भावो मरको वा भवेदिति || Su. Su. 6/16
3. तत्र, अव्यापन्नानामोषधीनामपां चोपयोगः || Su. Su. 6/18
4. कदाचिदव्यापन्नेष्वपि ऋतुषु कृत्याभिशापरक्षः क्रोधाधर्मैरुपध्वस्यन्ते जनपदाः, विषौषधिपुष्पगन्धेन वा वायुनोपनीतेनाक्रम्यते यो देशस्तत्र दोषप्रकृत्यविशेषेण कासश्वासवमथुप्रतिश्यायशिरोरुग्ज्वरैरुपतप्यन्ते, ग्रहनक्षत्रचरितैर्वा, गृहदारशयनासनयानवाहनमणिरत्नोपकरणगर्हितलक्षणनिमित्तप्रादुर्भावैर्वा || Su. Su. 6/19
5. दृश्यन्ते हि खलु सौम्य! नक्षत्रग्रहगणचन्द्रसूर्यानिलानलानां दिशां चाप्रकृतिभूतानामृतुवैकारिका^[2] भावाः, अचिरादितो भूरपि च न यथावद्रसवीर्यविपाकप्रभावमोषधीनां प्रतिविधास्यति, तद्वियोगाच्चातङ्कप्रायता नियता | तस्मात् प्रागुद्ध्वंसात् प्राक् च भूमेर्विरसीभावाद्बद्धरध्वं सौम्य! भैषज्यानि यावन्नोपहतरसवीर्यविपाकप्रभावाणि भवन्ति | वयं चैषां रसवीर्यविपाकप्रभावानुपयोक्ष्यामहे ये चास्माननुकाङ्क्षन्ति, यांश्च वयमनुकाङ्क्षामः | न हि सम्यगुद्धृतेषु सौम्य! भैषज्येषु सम्यग्विहितेषु सम्यक् चावचारितेषु जनपदोद्ध्वंसकराणां विकाराणां किञ्चित् प्रतीकारगौरवं भवति || Ch. Vi. 3/4

Sutra Supporting Quarantine

1. तत्र, स्थानपरित्यागशान्तिकर्म प्रायश्चित्त मङ्गल जप होमोपहारेज्याञ्जलिनमस्कारतपोनियम दयादानदीक्षाभ्युपगमदेवताब्राह्मणगुरुपरैर्भूवितव्यम्, एवं साधु भवति || Su. Su. 6/20

Causes for Janapadodhwamsa

1. द्विविधो हेतुर्व्याधिजनकः प्राणिनां भवति- साधारणः, असाधारणश्च; तत्रासाधारणं प्रतिपुरुषनियतं वातादिजनकमाहाराद्यभिधाय बहुजनसाधारणं वातजलदेशकालरूपं साधारणरोगकारणमभिधातुं जनपदोद्ध्वंसनीयोऽभिधीयते | Cakrapani on Cha. Vi. 3/1

2. प्रकृत्यादिभिर्भावैर्मनुष्याणां येऽन्ये भावाः सामान्यास्तद्वैगुण्यात् समानकालाः समानलिङ्गाश्च व्याधयोऽभिनिर्वर्तमाना जनपदमुद्ध्वंसयन्ति।
ते तु खल्विमे भावाः सामान्या जनपदेषु भवन्ति; तद्यथा- वायुः, उदकं, देशः, काल इति।। Ch. Vi. 3/6
3. वाय्वादीनां यद्वैगुण्यमुत्पद्यते तस्य मूलमधर्मः; तन्मूलं वाऽसत्कर्म^[१] पूर्वकृतं; तयोर्योनिः प्रज्ञापराध एव।
तद्यथा- यदा वै देशनगरनिगमजनपदप्रधाना^[२] धर्ममुत्क्रम्याधर्मेण प्रजां वर्तयन्ति, तदाश्रितोपाश्रिताः पौरजनपदा व्यवहारोपजीविनश्च तमधर्ममभिवर्धयन्ति, ततः सोऽधर्मः प्रसभं धर्ममन्तर्धत्ते, ततस्तेऽन्तर्हितधर्माणो देवताभिरपि त्यज्यन्ते; तेषां तथाऽन्तर्हितधर्मणामधर्मप्रधानानामपक्रान्तदेवतानामृतवो व्यापद्यन्ते; तेन नापो यथाकालं देवो वर्षति न वा वर्षति विकृतं वा वर्षति, वाता न सम्यग्भवान्ति, क्षितिर्व्यापद्यते, सलिलान्युपशुष्यन्ति, ओषधयः स्वभावं परिहायापद्यन्ते विकृतिं; तत उद्ध्वंसन्ते जनपदाः स्पृश्याभ्यवहार्यदोषात्^[३]।। Ch. Vi. 3/20

Lakshnas of dooshita janapadodwamskara bhava

1. तत्र वातमेवंविधमनारोग्यकरं विद्यात्; तद्यथा-यथर्तुविषम मतिस्तिमितमतिचलमतिपरुष-
मतिशीतमत्युष्णमतिरूक्षमत्यभिष्यन्दिनमतिभैरवारावमतिप्रतिहत-
परस्परगतिमतिकुण्डलिनमसात्म्यगन्धबाष्पसिकतापांशुधूमोपहतमिति (१);
उदकं तु खल्वत्यर्थविकृतगन्धवर्णरसस्पर्शं
क्लेदबहुलमपक्रान्तजलचरविहङ्गमुपक्षीणजलेशयमप्रीतिकरमपगतगुणं^[१] विद्यात् (२);
देशं पुनः प्रकृतिविकृतवर्णगन्धरसस्पर्शं क्लेदबहुलमुपसृष्टं
सरीसृपव्यालमशकशलभमक्षिकामूषकोलूकशमाशानिकशकुनिजम्बूकादिभिस्तृणोलूपोपवनवन्तं
प्रतानादिबहुलमपूर्ववदवपतितशुष्कनष्टशस्यं धूम्रपवनं
प्रधमातपतत्रिगणमुत्कृष्टश्वगणमुद्भ्रान्तव्यथितविविधमृगपक्षिसङ्घमुत्सृष्टनष्टधर्मसत्यलज्जाचारशीलगुणजनपदं
शश्वत्क्षुभितोदीर्णसलिलाशयं^[२] प्रततोल्कापातनिर्घातभूमिकम्पमतिभयारावरूपं^[३]
रूक्षताम्राणुसिताभ्रजालसंवृतार्कचन्द्रतारकमभीक्षणं ससम्भ्रमोद्वेगमिव सत्रासरुदितमिव सतमस्कमिव
गुह्यकाचरितमिवाक्रन्दितशब्दबहुलं चाहितं विद्यात् (३);
कालं तु खलु यथर्तुलिङ्गाद्विपरीतलिङ्गमतिलिङ्गं हीनलिङ्गं चाहितं व्यवस्येत् (४);
इमानेवन्दोषयुक्तांश्चतुरो भावाञ्जनपदोद्ध्वंसकरान् वदन्ति कुशलाः; अतोऽन्यथाभूतांस्तु हितानाचक्षते।।७।।
विगुणेष्वपि खल्वेतेषु जनपदोद्ध्वंसकरेषु भावेषु भेषजेनोपपाद्यमानानामभयं भवति रोगेभ्य इति।।८।। Ch.
Vi. 3/7 & 8;

Line of treatment of Janapadodwamsa

1. चतुर्ष्वपि तु दुष्टेषु कालान्तेषु यदा नराः।
भेषजेनोपपाद्यन्ते न भवन्त्यातुरास्तदा।।१२।।
येषां न मृत्युसामान्यं सामान्यं न च कर्मणाम्।
कर्म पञ्चविधं तेषां भेषजं परमुच्यते।।१३।।
रसायनानां विधिवञ्चोपयोगः प्रशस्यते।
शस्यते देहवृत्तिश्च भेषजैः पूर्वमुद्धृतैः।।१४।।
सत्यं भूते दया दानं बलयो देवतार्चनम्।
सद्धृतस्यानुवृत्तिश्च प्रशमो गुप्तिरात्मनः।।१५।।
हितं जनपदानां च शिवानामुपसेवनम्।
सेवनं ब्रह्मचर्यस्य तथैव ब्रह्मचारिणाम्।।१६।।
सङ्कथा धर्मशास्त्राणां महर्षीणां जितात्मनाम्।

धार्मिकैः सात्त्विकैर्नित्यं सहास्या वृद्धसम्मतैः||१७||
इत्येतद्भेषजं प्रोक्तमायुषः परिपालनम्।
येषामनियतो मृत्युस्तस्मिन् काले सुदारुणे||१८|| Ch. Vi. 3/12-18

The first case of the 2019–20 corona virus pandemic in India was reported on 30 January 2020, originating from China. As of 2 April 2020, the Ministry of Health and Family Welfare have confirmed a total of 2,069 cases, 156 recoveries (including 1 migration) and 53 deaths in the country. Experts suggest the number of infections could be a substantial underestimate, as India's testing rates are among the lowest in the world. The infection rate of COVID-19 in India is reported to be 1.7, significantly lower than in the worst affected countries.

This is the junction period (Ritu sandhi) of two seasons. Strength (Immunity?) is less at such point of time. The dietary regimen should be based on the principle of Ritu sandhi kala.

For easy understanding the diet & yoga plan can be classified in 2 stages

- 1. Diet & Yoga during Quarantine**
- 2. Diet & Yoga during active infection state**

1. Diet & Yoga during Quarantine

Dinacarya

1. Waking up at 5.30 AM –

Bowel & Bladder clearance

Brushing

Asana & Pranayama Practice:

Loosening exercises

Surya Namaskara 6 rounds

Tādāsana

Vriksāsana

Pāda-Hastāsana

Ardha Cakrāsana

Trikonāsana

Bhadrāsana

Vajrāsana

Ardha Ustrāsana

Ustrāsana

Śśakāsana

Uttāna Mandūkāsana

Vakrāsana

Makarāsana

Bhujangāsana

Śśalabhāsana

Setubandhāsana

Uttāna Pādāsana

Ardha Halāsana

Pavana Muktāsana Śśavāsana

Nadīśśodhana or Anuloma viloma prānāyāma
Bhastrika

Morning 7 AM: Kashaya Prepared from Dhanya+ Jeeraka 100ml

Bath & Prayer: 8.30 AM

Sankalpa during prayer: I commit myself to remain in a balanced state of mind all the time. It is in this state that my development reaches its greatest possibility. I commit to do my duty to self, family, at work, to society, and to the world, for the promotion of health and harmony.

Breakfast: 9.00 AM for breakfast any easily digestible rice items can be given for example, Akki Rave Uppittu, Pongal, Rice Ganji etc.

For hydrating the body instead of plain water seasonal drinks like Shunthi jala, Vijayasara jala, Musta jala, Madhoodaka, Dhanyaka jala, Sariva jala etc. depending on the seasonal variation can be selected.

After breakfast: News paper reading/watching TV/ Book reading/ Novel reading/ Watching Motivational talks/ Listening to spiritual discourses/ Movies or any other individual activity can be planned.

Lunch: 1.30 to 2.00 PM Depending on the dietary habits of the individual easily digestible vegetarian diet can be considered.

Post lunch: **No day sleep** if he is young. Aged persons & Children are allowed on the need basis.

The activities which are planned in before lunch session can be advocated here with modification on need basis.

Evening 5.00 to 7.00 PM A session of Dhyana can be advised, (Audio command dhyana are available in the market/internet/online)

Dinner 8.30 PM: Depending on the dietary habits of the individual easily light vegetarian diet can be considered.

Post Dinner 9.00 to 10.00 PM: Spiritual reading

Going to bed at 10.00 PM

Sadvritta(Good Conducts) to be practiced during quarantine:

Person should be; Truthful, free from anger, avoidance of alcohol & sex, do not indulging in violence & exhaustion, practicing some sacred chants, cleanliness, giving respect to elders, peaceful, pleasing in their speech, compassionate, free from ego, no narrow-mindedness.

Practicing of Sadvritta will help the stimulation of Psycho-neuro-immunological response of the body, their by protecting the individual against the chance of getting infection.

Grains & Pulses that can be used in diet: Rice, Wheat, Barley, Jowar, Ragi, Greengram dal, Tuar dal. (selection of the grain & pulses should be dependent on the habits & habitat of the individual)

Vegetables: Ridge gourd, Snake gourd, Bottle gourd, Bitter gourd, Beans, Carrot, Onion

Greens: Coriander, Pudeena and other leafy vegetables

Note: All Vegetables & greens should be baked with sufficient quantity of water, decant the water 7 then fry the vegetables in Ghee or oil before adding it to diet.

Dairy products: Milk in diluted form(1:1 dilution), Butter & Ghee in appropriate quantity, Properly churned butter milk can be used.

Fruits: Pomegranate, Papaya, Citrus fruits in limited quantity.

To be avoided: Black gram, Bengal gram, All types of sprouts, All types of tubers, Green chilli, Tomato, Oil fried items, Curds, NonVeg foods, Fish, Egg

Other beneficial practices include:

Gandoosha / Kavala (mouth rinsing and gargling)

With warm Salt water / Turmeric water / Triphala Kashaya / Yashti Kashaya - Need Basis

Dhoomapaana (Medicated smoke inhalation / fumigation) :

Haridra +/- Vacha, Lashuna - Need Basis

Steam inhalation :

Dashamoola Kashaya / Tulasi boiled water - Need Basis

Quarantine Environmental cleansing: Sushutokta Post operative fumigation or Kapa sthanokta environmental cleansing methods can be adopted

2. Diet & Yoga during active infection state

Day 1 & 2:

- **Signs and Symptoms:** Will be asymptomatic or patients will be having mild fever; with fatigue, muscle pain, dry cough; Very few people may have diarrhea or nausea (1-2 days earlier)

Diet & Activities

Diet	
Do's	* Light food (Ganji / rice, rasam (prepared with pepper, avoid tomato). *Thin gruel prepared with Laaja + dry ginger + Coriander seeds + Long pepper (may add Pomegranate juice or ginger).
Avoid	Heavy food intake, Astringent food
Drinking water	Musta jala, Dhanyaka jala, Sarivajala, Shunthi jala, Shadanga Pana – Need basis
Activities	
Do's	Complete rest (Physical as well as Psychological)
Avoid	Day sleep, Oil application / massage, Sex, Exposure to wind, Exercise, Anger

Day 3 & 4

- **Signs and symptoms:** Low grade Fever which gradually increases. Itchy throat & Cough – mostly dry; gets more severe over time Shortness of Breath & breathing difficulties

Diet & Activities

Diet	
Do's	* Light food (Ganji / rice, rasam (prepared with pepper, avoid tomato). *Thin gruel prepared with Laaja + dry ginger + Coriander seeds + Long pepper (may add Pomegranate juice or ginger).
Avoid	Heavy food intake, Astringent food
Drinking water	Musta jala, Dhanyaka jala, Sarivajala, Shunthi jala, Shadanga Pana – Need basis
Activities	
Do's	Complete rest (Physical as well as Psychological)
Avoid	Day sleep, Oil application / massage, Sex, Exposure to wind, Exercise, Anger

Day 5

Signs and Symptoms: Gastro-intestinal symptoms like Diarrhea / cramps, head ache and fever might become normal or it may increase

Diet & Activities

Diet	
Do's	* Light food (Ganji / rice, rasam (prepared with pepper, avoid tomato). *Thin gruel prepared with Laaja + dry ginger + Coriander seeds + Long pepper (may add Pomegranate juice or ginger).
Avoid	Heavy food intake, Astringent food
Drinking water	Musta jala, Dhanyaka jala, Sarivajala, Shunthi jala, Shadanga Pana - Need basis
Activities	
Do's	Complete rest (Physical as well as Psychological)
Avoid	Day sleep, Oil application / massage, Sex, Exposure to wind, Exercise, Anger

Day 6-7

Signs and Symptoms: More body pain, head ache will reduce; diarrhea might increase / might reduce but stomach upset

Diet & Activities

Diet	
Do's	* Light food (Ganji / rice, rasam (prepared with pepper, avoid tomato). *Thin gruel prepared with Laaja + dry ginger + Coriander seeds + Long pepper (may add Pomegranate juice or ginger).
Avoid	Heavy food intake, Astringent food
Drinking water	Musta jala, Dhanyaka jala, Sarivajala, Shunthi jala, Shadanga Pana - Need basis
Activities	
Do's	Complete rest (Physical as well as Psychological)
Avoid	Day sleep, Oil application / massage, Sex, Exposure to wind, Exercise, Anger

Day 8 & 9

Symptoms start reducing, Keep watching if Lower fever, lower body pain, energy level will increase, Cough will be persisting with running nose.

- Once the patient is totally out of fever, appetite is improved; one can be prescribed with hunger increasing diet.

Diet & Activities

Diet	
Do's	* Light food (Ganji / rice, rasam (prepared with pepper, avoid tomato). *If required, Rice prepared with Shunthy (ginger) water. *Thin gruel prepared with Laaja + dry ginger + Coriander seeds + Long pepper (may add Pomegranate juice or ginger). *Yoosha with Mudga
Avoid	Heavy food intake, Astringent food
Drinking water	Musta jala, Dhanyaka jala, Sarivajala, Shunthi jala, Shadanga Pana – Need basis
Activities	
Do's	Complete rest (Physical as well as Psychological)
Avoid	Day sleep, Oil application / massage, Sex, Exposure to wind, Exercise, Anger

Note:

- During this day of active infection NO YOGASANA IS PRACTICED
- Breathing observation is done to maintain the psychological balance

Thanking you

Yours sincerely

Dr. Venkatakrisna K. V.

***PROTOCOL DEVELOPED BY
DR.ANANDA KATTI***

AYURVEDIC INTERPRITATION AND REFERENCES OF COVID-19

Leads from case zero

It is recorded that the first person who contacted raw meat of cat, bat from where he contacted the virus. According to ayurveda uncooked meat is banned and Krusha Mamsa never to be consumed (Ca. Su.5). Krusha Mamsa can be the meat of debilitated animals or naturally Krusha animals (bat).

It is also recorded in news paper, first patient did perform sex with bat which is Ayoni Maithuna. Both these acts are not prescribed for humans hence that act (Karma) amounts to Adharma. Adharma is primary cause for any Janapadodhwamsa. The act of Adharma (Ca.Vi.4) is because of Prajnaaparadha. This has lead to first person contacted corona virus which our Acharya have said as Raakshasa or Bhoota. (Ca.Vi.4).

SPREAD OF THE DISEASE.

From these corona virus or Rakshasa or Bhoota will spread from one person to another person by the Hetu used as Prasangat Gatrasamparshat..... i.e person to person spread.

PROPOGATION:

Acharya Charaka enumerated four causes for any disease of mass destruction. Vayu and Jala are predominantly evident in COVID 19. The Raksahasa or Virus from one person comes out through in the form of tiny droplets (Dustha Jala). It is propelled or transported to some distance by Vayu. It is also discovered that air travel has lead to thus epidemic to be pandemic and the virus can survive for longer period in air conditioned atmosphere. Studies also have revealed that droplets can remain suspended in air for 4 hours. Clinical interpretations is deliberately left because there are many expert clinicians in the panel.

PREVENTIVE MEASURES:

From the preventive management guidelines in Ca. Su.7.5

1. Prevention from contact of Bhoota Vayu. (Vayu with COVID 19 virus).
2. Prevention from contact of Visha Vayu (Vayu with Droplets).
3. Practice of Sadvrutta.

All these are to be done before the onset as preventive measures. (Praageva Praajnyah)

MANAGEMENT:

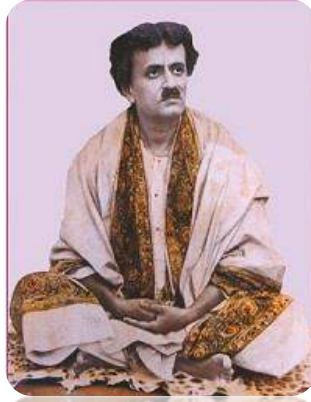
1. Maintaining the hygiene- Shoucha.
2. Frequent cleaning of Hasta Paada.
3. Frequent cleaning of Malaayana. (Malaayaneshu bheekshnah)- Hands and external orifices to be washed frequently i.e hand wash with soaps etc.
4. From the concept of Chatri Dandi Mouli (Ca.Su. 8). Mouli can be interpreted and borrowed as
5. Avoiding exposure to Visha vayu (Vishaninah Purovata- Ca. Su. 8.19)
6. Surroundings to be fumigated (Dhoopana).
7. Nirmalaambara Dhaarana- wearing washed clothes.
8. Ushnodaka Pana.
9. Vihara- Vyaayama and Brahmacharya. (Ca.Vi.4)
10. Ksheera and Grutha Prayoga as Rasayana. Rasayana is indicated in Janapadodhwamsa Chikitsa.
11. Regular dinacharya with special emphasis on Danta Dhaavana, Nasya, anjana and Abhyanga.
12. Strictly following medical/health and govt advicors. (na niyamam Bhindyaat- Ca. Su. 8. 25)

FROM JANAPADODWAMSA CONTEXT:

1. Pancha Vidha Karma is indicated- Among the pancha karma, many experts opine nasya should be performed. Pratimarsha nasya cannot only prevent but also arrest the growth and multiplication of virus in the patients. (lipid virus interaction is the base for this opinion).
2. Rasayana along with Ksheera Prayoga, Gritha Prayoga, Chyavanprasha Prayoga, Amalaki Prayoga can be proposed. Acharya Rasayana also should be practiced.
3. Brahmacharya- Sexual abstinence is mandatory

4. Strictly practicing the below mentioned Sadvrutta
- a) Using masks- Anaavruta Mukha Jhrubha Kshavatu Haasya (Ca.Su.8), one should cover the mouth while cough, sneeze, yawn and laughter.
 - b) Not to touch nose – Nasikaam Krushniyaat. (Ca. Su. 8)
 - c) Not to spit in social places- Shleshma Singhhanaka Moorkhath- Ca.Su.8.12.

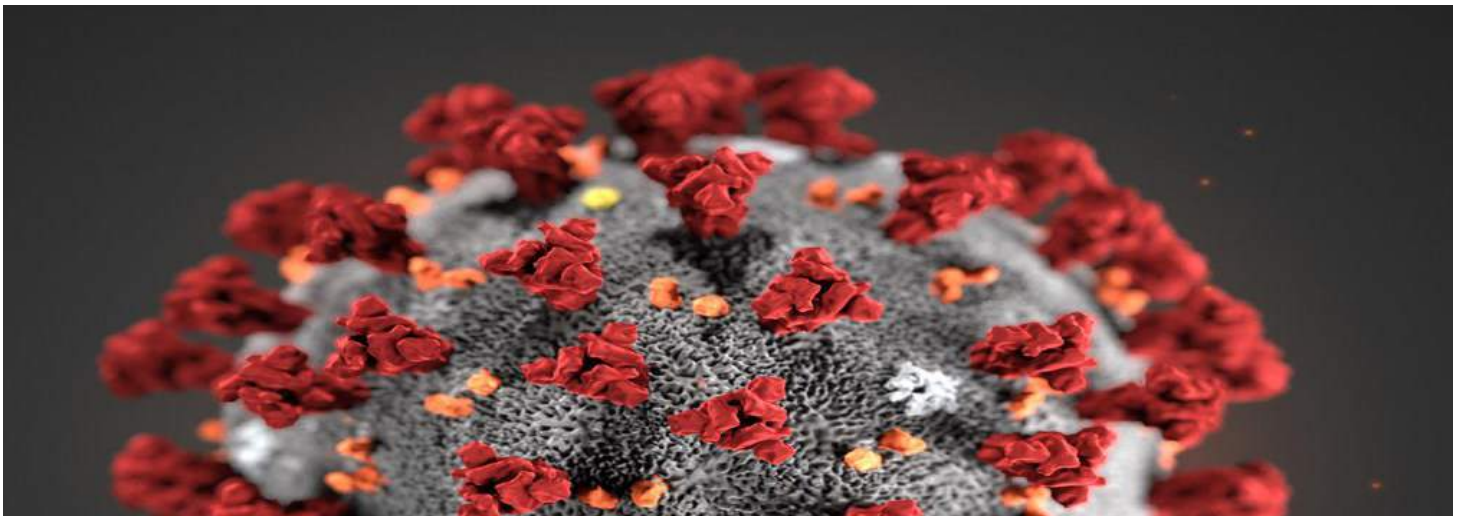
***PROTOCOL DEVELOPED BY
DR.SHIVALINGAPPA J ARAKERE***



COVID-19

AN AYURVEDIC PROSPECTIVE

Submitted by-
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INTRODUCTION

COVID-19 (SARS COV-2) is emerged as global pandemic affecting nearly 200 countries (10 Lakh Population) throughout the world, with 4-5 % mortality rate. In India nearly 2500 positive cases as on today with 3% of mortality rate is reported. Government of India has taken aggressive and preventive measures in controlling its community spread by flattening the curve in the graph.

Ayurveda generally perceived as a system of medicine majorly dealing with non-communicable diseases and chronic health conditions, but when we explore the classical texts of Ayurveda, we come across many such instances where in disease outbreak (Epidemic) is understood as Janapadhodhwamsa. A sincere effort has been put forth to meet the objectives of **COVID-19. A SCIENTIFIC RESEARCH TASK FORCE COMMITTEE** has been constituted by Department of AYUSH Govt. of Karnataka as a preemptive measure to control the pandemic form of Corona Virus disease.

TRISUTRA OF AYURVEDA

- ❖ **Hetu Sutra Vivechana:** As mentioned in Charaka Samhita Vimanasthana, in the context of Janapadhodhwamsa¹, even though there is dissimilarity in the prakruthi of human beings, still there are such factors are common to all individuals and vitiation of these factors leads to the simultaneous manifestation of diseases having the same set of symptoms leading to the destructions of the country. Factors which are common for all are- *Vayu, Jala, Desha* and *Kala*.

Mode of transmission

The following are the different modes of transmission of the Corona Virus which is mentioned in the context of Kusta adhikara (contagious diseases)²

- **Prasangath** – By physical contact/ sexual contact
- **Gatrasamsparshath** – By touching the infected person
- **Nishwasath** – When exposed to exhaled air of the affected person including the droplet while coughing or sneezing
- **Saha Bhojanath** – Eating contaminated food with all together
- **Saha Shayyath** – Sharing of bed, pillow or blanket of infected person
- **Saha Asanath** – Sharing the seats specially in crowded public transports
- **Gandhamala Anulepanath** – Sharing of personal cosmetic things

❖ **Linga Sutra Vivechana :**

According to WHO, clinical presentation of COVID-19 are as follows

Common symptoms include:

- Fever- 88%
- Dry cough- 67%
- Fatigue- 38%

Other symptoms include:

- Shortness of breath- 18.7%
- Aches and pains- 14.9%
- Sore throat
- Very few people will report diarrhea, nausea or a runny nose.

Severity of COVID-19:-

- Severe illness (Hypoxemia, >50% lung involvement on imaging within 24 to 48 Hours) in 14%
- Critical Disease (Respiratory failure, shock, multi-organ dysfunction syndrome) was Reported in 5%
- Overall case fatality rate was between 2.3 to 5%

Understanding of Illness

As the **COVID-19** is newly emerged disease condition, it is very difficult to understand the clinical presentation in a single context mentioned in classical texts. In the context of Rutucharya⁶, Acharya Susruta mentioned about the Janapadhodhwamsa, Pandemic diseases with symptoms like Cough, Breathlessness, Vomiting, Cold, Headache and Fever spreads by means of polluted air. He also advises for Sthana parityaga (Social Distance) by means of breakdown of chain in community spreading.

Clinical presentation of **COVID-19** can be understood in terms of Sannipataja jwara (with Heena Kapha, Pitta Madhya, Vata Adhika), Pachyamana jwara, Vataja & Kshataja kasa.

The symptoms of the COVID 19 are similar with the one of the **Sannipataja Jwara³**, where Kapha is mild, Pitta is moderate and Vata is aggressive –

- Shwasa- Difficulty in breathing
- Kasa – Cough
- Pratishyaya – Cold & Running nose
- Mukhashosha- Dry mouth
- Ati Parshwa ruk- Severe pain in flanks.

Pachyamana Jwara Lakshana⁴: (Once the Ama stage of Jwara ends)

- Adhika Jwara Vega – High grade fever
- Trushna- Thirst
- Pralapa- Delirium, irrelevant talk
- Shwasa – Dyspnoea
- Bhrama- Giddiness
- Mala and Shleshma pravrutthi- Elimination of Feces as well as Phlegm

Kshataja kasa⁵:-

- Excessive pain in the throat and feeling of cracking pain in the chest
- Pricking type of pain as if pricked by sharp needles
- Excruciating pain and discomfort by touch on chest, miserable appearance.
- Pain in joints and fingers, fever, labored breath, thirst and altered voice
- While coughing, sounds humming like pigeon.

❖ Aoushadhi Sutra Vivechana :

➤ Preventive Care (Health Promotion)

Advised for Common public

Amalaki– *Āmalaki*⁷ possesses significant Immunostimulant activity and moderate cytoprotective activity. It is rich in Vitamin C which is a natural Antioxidant

Ashwagandha – Withaferin⁸ A and 3-b-hydroxy-2,3-dihydrowithanolide F isolated from *Withania somnifera* show promising antibacterial, antitumoral, immunomodulating and anti-inflammatory properties

Antiviral⁹ activity of *Withania somnifera* extract has been reported earlier on Herpes Simplex Virus Type-1.

The inhibitory¹⁰ action of Withaferin A, a steroidal compound present in *Withania somnifera* against Herpes Simplex Virus has also been reported.

Indhukanta Gritha – Preliminary studies in our laboratory showed IG to possess considerable immunomodulatory effects with a Th1 type of immune response¹¹

Ashtamangala Gritha – It increases both, Haemagglutinating antibody (HA) titre and Delayed type hypersensitivity (DTH) response which indicates that the polyherbal formulation potentiates humoral as well as cellular immunity¹².

Lashuna Ksheera paka - *Allium sativum*¹³ modulates cytokine secretion and that such modulation may provide a mechanism of action for many of their therapeutic effects.

Ushna Jalapana is advised frequently

Primary prevention by means of Bahirparimarjana Upakramas-

Advised for those who are in Quarantine / Isolation / Vulnerable group

- Considering Route of entry of Virus in Mucosal linings of the Oropharynx, Nose & Eyes, Primary prevention for above mentioned category have to be adopted in the form of Bahirparimarjana upakramas like Kavala & Gandusha, Nasya, Akshi tarpana/parisheka & Dhupana karma.

Kavala & Gandusha:

- Haritaki Kashaya with Honey¹⁴.
- Kashaya¹⁵ prepared with Draksha, Guduchi, Sumanpravala, Darvi, Yavasa, Triphala with Honey
- Trikatu with Kshara jala and Lavana¹⁶

Netra Tarpana/ Parisheka: :

- Triphala Gritha¹⁷ can be used for Tarpana and Triphala Kashaya¹⁸ can be used for Parisheka

Nasya:

- Pratimarsha nasya with Anu taila²² or Goghrita.

All these external therapies (Kavala, Gandusha, Nasya & Netra tarpana/ parisheka) will induce first line of defense by strengthening the mucosal lining of eyes, nasal cavity & oropharynx. These therapies create unfavorable condition (barrier) for proliferation & infiltration of pathogens. Kashayas being alkaline media retards the growth of micro organisms.

Dhupana karma:

▪ Guggulu, Aguru, Sarjarasa, Vacha, Swetha Sarshapa, Lavana, Nimba patra with Gritha. This dhupana¹⁹ karma is a **Traditional method of fumigation which ensures the protection from microbes in the living atmosphere.**

Ushna Jalapana:

In the context of Janapadhodhwamsa Vyadhis Characterized by Jwara as a main clinical feature Ushna jalapana²³ is strongly recommended by our Acharyas. Hot water is best Appetizer, Digestive, good for throat ailments, helps to relieve cough, breathlessness, cold, running nose & it clears phlegm in chest²⁴

➤ **Curative Measures:**

Advised for Hospitalized patients

All **COVID- 19** positive cases should be treated with standard treatment protocol advised by WHO/ state health authority. The following Ayurvedic line of treatment is formulated from the context of Jwara (Sannipataja jwara & Pachyamana jwara in specific), Kasa (Vataja & Kshataja kasa in specific) & Swasa. These Ayurvedic medicaments can be advised as Adjuvant/Supportive care in **COVID- 19** positive cases.

• **Shatyadi Varga Kashaya:**

Shati, Puskaramula, Srungi, Duralabha, Guduchi, Ginger, Patha, Kirata, Katukarohini.

Cures: Sannipata Jwara along with Kasa (cough), Hrut graha (stiffness in cardiac region), Parshva arati (pain in the sides of the chest), Shvasa (Breathlessness) and Tandra (drowsiness).

• **Bruhatyadi gana Kashaya :**

Both the varieties of Brihati, Pauskara, Shati, Srungi, Duralabha, Seeds of Vatsaka, Patola and Katukarohini.

Cures: Sannipata Jwara, Kasa (cough) etc. and all types of complications.

- The Peya prepared of red variety of rice (Raktashali) and boiled with Gokshura (*Tribulus terresteris*) and Kantakari (*Solanum surattense*) alleviates fever and it is taken by the patient suffering from pain in Parshva (sides of the chest), Basti (urinary bladder) and Shiras (head).
- The Vidarigandhadi Gana Yavagu is stimulant of digestion and it promotes sweating. This Yavagu is taken by a patient suffering from Jwara associated with Kasa (cough), Shvasa (breathlessness) and Hikka (hiccup)
- The Peya which is sour and which is boiled with Prishnaparni (*Uraria picta*), Bala (*Sida cordifolia*), Bilva (*Aegle marmelus*), Shunti (*Zingiber officinalis*), Utpala (*Nymphaea alba*) and Dhanyaka (*Coriander sativa*), is taken by a person suffering from Jwara-atisara (fever associated with diarrhea).

- Ksheerapaka prepared with Shunti (*Zingiber officinalis*)/Lashuna (*Allium sativum*) can be given in Pachyamana avastha of Jwara.

“Based on clinical condition of the patient, below mentioned medicines can be given with appropriate dosage.”

- Agastya Hareetaki Rasayana
- Chyavanaprash Avalehya
- Vasavalehya
- Trayushanadi Gritha
- Dashamula Katutraya Kashaya
- Amritarista
- Pippalyasava
- Kanakasava
- Pushkaramulasava
- Sudarshana Ghanavati
- Mrityunjaya Rasa
- Jayamangala Rasa

➤ ***Post Recovery Supportive Management:***

- Vardhamana Pippali Rasayana- Pippali is considered to be best Rasayana for Pranavaha srotas.
- Pranayama- Breathing exercises improves respiratory capacity.
- Yoga- It maintains physical and mental stability.

Conclusion:

COVID-19 is a recent serious global health problem. There is no specific antiviral treatment recommended for **COVID-19** & No vaccine is currently available at this point of time. In Ayurveda, **COVID-19** is better understood in terms of some the conditions like Sannipataja Jwara, Kshataja Kasa, Pachyamana Jwara. Here an attempt is made to establish the Etiopathogenesis & Management (Preventive & Curative) of **COVID-19** as per Ayurvedic classics in the form of Trisutra of Ayurveda for better understanding and evidence based clinical practice in mild & moderate form of illness. Treatment protocol can be standardized & established after clinical trial.

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***PROTOCOL DEVELOPED BY
DR.A.S.PRASHANTH***

**UNDERSTANDING COVID 19: ETIOPATHOGENESIS, SYMPTOMATOLOGY
ACCORDING TO PRINCIPLES OF AYURVEDA AND POSSIBLE TREATMENT
SCHEDULES.**

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INTRODUCTION

According to the World Health Organization (WHO), viral diseases continue to emerge and represent a serious issue to public health. In the last twenty years, several viral epidemics such as the severe acute respiratory syndrome coronavirus (SARS-CoV) in 2002 to 2003, and H1N1 influenza in 2009, have been recorded. Most recently, the Middle East respiratory syndrome coronavirus (MERS-CoV) was first identified in Saudi Arabia in 2012.

On 30 January 2020, the WHO declared COVID-19 as the sixth public health emergency of international concern. SARS-CoV-2 is closely related to two bat-derived severe acute respiratory syndrome-like coronaviruses, bat-SL-CoVZC45 and bat-SL-CoVZXC21. It is spread by human-to-human transmission via droplets or direct contact, and infection has been estimated to have mean incubation period of 6.4 days and a basic reproduction number of 2.24-3.58.

Based on current epidemiological investigations, the incubation period of COVID-19 is ranged between 1 to 14 days, and generally within 3 to 7 days.

Fever, fatigue and dry coughing are considered the main clinical manifestations, but symptoms such as stuffy nose, runny nose, pharyngalgia, myalgia and diarrhea are relatively less common. In severe cases, dyspnea and/or hypoxemia usually occurs after one week of disease onset, and the worse can rapidly progresses to acute respiratory distress syndrome, septic shock, metabolic acidosis hard to correct, and hemorrhage and coagulation dysfunction, multiple organ failure, etc. It's worth noting that patients with severe or critical illness may have a moderate to low fever, or no fever at all.

Ayurveda considers it as a Janapada-udhwamsa vikara. It can be grouped under the class of agantuja vikaara with special reference to the class of Bhuutabhishangajam (microbiological etiology).

Agantuja jwara- Fever by *Agantuja jwara* (*jwara* caused due to exogenous factors) is the eighth type of fever. This fever is accompanied with pain and is often caused by trauma, association with evil, fascination, and wrath (of the wise and the elders). These causes directly manifest as fever without any prodromal symptoms for a transitional duration. Slowly, with the passage of time, *doshas* get vitiated and their effects manifest as above. Fevers caused due to trauma influence blood pathology, while association with evil afflicts *vata* and *pitta*, and fascination and wrath causes *sannipata* (and therefore, leads to an incurable condition) exogenic factors:

All the seven doshic *jwara* have their own doshic specifications with respect to the onset, symptomatology, and treatment principles. The exception is the *agantuja jwara*(exogenous), which should be treated with appropriate consideration to the *jwara*'s specific etiology.

DIFFERENT SAMPRAPTI' & OF COVID-19

Various sampraptis are to be considered as this is janapadodwamsa vyadhi and Ayurveda believes and follows that ' purusham purusham veekshya' i.e. Every individual may present with same vyadhi but based on nidana and prakruti samprapti formation may vary. Hence an attempt to analyse different sampraptis of present Pandemic Disease COVID 19.

Samprapti 1: with reference to Janapadodwamsa Vimana Adyaya of Charaka.

Vikruti in Ritu dharma(Akala varshadi darshana) will lead to anutpatti of Oshadi i.e. Aprakruta rasa veeryadi in dravya; that will lead to dosha vikruti in Deha when person consumes it. This vikriti can also be analysed with loka(universe) i.e. Vayu, udaka, desha and kala vikruti. By considering Loka purisha Samya Sidhanta: Vayu as Vatadi Dosha ; Udaka as Rasadi Drava Dhatu ; Desha as Anga Pratyanga and avayava; Kala as Dosha dushya sammurchanat arabhya vayadhi utpanna paryanta i.e. Kala Samprapti.

Paraspara upahata Vayu Uadaka etc. will lead to abnormal or asamyak gandha bashpa dhuma rasa kleda vikruti. Desha vikruti leads to vikrutaguna karma of bhumistha jeevi such as Sarisripa., Vyala, pakshi, mooashaka, ulooka and Sthavara Dravyas also. Kala influences all these and produces Aprakruta laxanas, Thus vitiated Vayu, Udaka, Desha, Kala are inter-related. They tend to produce dushpariharya vikaras by swabhava; Collectively known as kasta sadhya vyadhi. By above explanation these turning to Kasta sadhya vayadis is due to single cause known as adharma(not following dinacharya, ritucharya, sadvritta, kalika shodhana and involving in asatmya indriyardha samyoga and pranjaaparadha).

Samprapti-2: with special reference to nija and agantu Karana as per Charaka, sutra 19-20.

It is said that “*Sarva eva nija vikaraha na anyatra vata pitta kaphebhyo nivarthante*” and “*Dosha evahi sarvesham vyadhinam eka kaaranam*”. Here the word sarva eva vikara and sarvesham vyadhinam give the information that no disease (may be nija /Agantuja) can origin without vatadi dosha. The vikruta doshas lead to swadhatu vaishamyia where dhatu means Vatadayaha, rasadayaha and Raja prabhridayaha i.e. every component of the body gets vitiated and lead to bahuvikaras in Sharira. These Nija and Agantu have linked with each other i.e. Aganturanveti nijam vikaram....lead to anubhandha karana janya kasta sadhya vyadi utpatti.

“Aganturihi vyadha poorvam samutpanno vatapitta sleshmanam vaishamyam apaatayadill”

i.e. Due to four types of Agantu Karanas as explained in Jwara prakarana will lead to teevra peedam in deha (Achaya poorvaka dosha prakopa) which in turn leading to Dosha swasthana chaya and prakopa. Prakrupita dosha attaining prasara leads to Sroto vikruti and dhatu dusti by sanga, Vimarga gamana etc. leading to Sthana samsraya when lodged in Pranavaha srotas produces Pratishtyaya → Kasa → Swasa → Kshaya (tri-roopa, shadroopa and ekkadasha roopa).

In Maha srotas produces vikruta rasa dhatu utpatti producing Jwara Anga marda and Atisara laxanas. Here the possibility of krimi utpatti (jwara) in Agantu and Vishama jwara laxanas will explain the present Pandemic Disease **COVID 19**.

PREVENTIVE MEASURES FOR COVID 19

Advise him with the community prevention protocols :

- ❖ **Wash your hands:** Washing your hands before preparing or eating food, after going to the bathroom, after coughing or sneezing, and after handling garbage, goes a long way toward preventing the spread of bacteria and viruses. Keep a hygiene product, like an alcohol-based sanitizing gel, handy for when soap and water isn't available.
- ❖ **Bathe regularly:** Wash your body and your hair often.
- ❖ Drinking water- made up of Shadangam Kashaya Choornam one teaspoon boiled in two liters of water can be used as drinking water.
- ❖ Tulsi coffee made by Thulsi (holy basil), Sundi (ginger), Maricha (black pepper) and jaggery or sugar. Small onion (Shllot)/ vasa (Adathoda)/ Amruta (Tinospora cordifolia)/

Kachoori (Galanga) also can also be added according to the condition) - Can be taken three to four times a day

- ❖ Steam inhalation – With Tulsi(holy basil)/ Karpooravalli(Plectranthus amboinices) with Haridra(Turmeric).
- ❖ Gargling – Water boiled with Haridra(Turmeric)/Thriphala/Yashtimadhu/ Lavana
- ❖ Dhoopanam - Nimba/Coconut shell+ hingu/sarshapa+ tunic of garlic/onion+ salt, or All .
- ❖ Rub Rasnadi choornam over scalp.
- ❖ AHARA: According to ritu;
 - ✓ Laghu supachya Ahara
 - ✓ Ushnodaka

One should take easily digestible foods. Among cereals, old barley, wheat, rice, and others are preferred. Among pulses, lentil, *Mugda*, and others, can be taken. Food items tasting *Tikta* (bitter), *Katu*(pungent), and *Kashaya* (astringent) are to be taken. Besides those, honey is to be included in the diet. Meats like that of *Shahsa* (rabbit), which are easy to digest can be taken.

- Foods which are hard to digest are to be avoided. Those which are *Sheeta* (cold), *Snigdha* (viscous), *Guru*(heavy), *Amla* (sour), *Madhura* (sweet) are not preferred. New grains, curd, cold drinks, and so on, are also to be prohibited.

- ❖ TAMBOOLA SEVANA:
 - ✓ Mukha dourgandyahara
 - ✓ Krimighna

Ayurvedic classics mentioned that chewing betel leaves wards off increased Kapha, provide clarity, good taste and smell in the mouth, luster and charm on the face, it removes dirt of the jaw and teeth, gives pleasant voice, cleanses tongue, checks excessive salivation, is pleasing and alleviates diseases of throat. Combination of betel leaves with slaked lime, areca nut and catechu mitigates all the three Dosha. It is aphrodisiac, kills harmful microorganism, improves physical and mental stamina, improves quality of voice and brings good fortune. In diseases like Alasa (abscess at the route of tongue), Upajihika (ranula), Vidradhi (abscess), Talushosha (dryness of soft palate), Dantaroga

(diseases of teeth), Arbuda (tumour), Galaganda (goitre), Apchi (enlargements of the glands of the neck), and other Kapha Dosha disorder betel leaves is beneficial.

❖ **KAVALA- GANDUSHA:** with drugs like yastimadhu

The drug when moved within the oral cavity creates a pressure which stimulates pressoreceptor (stretch reflex) that are present in the mouth. Once the pressoreceptor is stimulated, the signals are sent to salivary nuclei in the brain stem which induces the secretion of saliva. Lysozyme is an enzyme present in saliva is bacteriostatic in action which prevents the growth of pathogenic microorganisms in the oral cavity. Antibody IgA present in saliva also provide protection against microorganisms. Proper absorption of the active principles takes place in the oral cavity due to the pressure created by the action of Kavala. Due to the regular movement of drug within the oral cavity, the microbes present within the oral cavity will be washed off and hence halitosis, plaque formation, tooth decay and gingivitis can be prevented. The active principles present in the formulation like tannin in **Pancha Ksheeri Vruksha Kashaya** and **Triphala kashaya**, catechin in **Khadiradi Kashaya**, sesamol and sesamin in **Tila Taila** have antimicrobial, wound healing property which helps in the removal of bad odour, gum bleeding and gingivitis. Thin and highly vascular mucosal layer inferior to the tongue (sublingual) permits the rapid absorption of the lipid soluble drugs into systemic circulation. Some of the drugs irritate the oral mucosa (by their chemical nature) and increases vascular permeability. Thus an active principle of Dravya is absorbed into systemic circulation.

CHIKITSA:

ADRAVYABHUTA CHIKITSA

➤ **ISOLATION: Su.Sa.**

In the management of Rajayakshma and sosha its explained to keep the patients isolated i.e. ajaopavasa- Aja sameepa vasa, aja releases antimicrobial agents. During the outbreak of covid 19 by corona virus, animals were least affected ; whether aja sameepa vasa, ajamootra aja shakrut creates antimicrobial atmosphere. A scope for reaserch is left unanswered??

According to the experienced senior Ayurveda vaidyas Gomutra becomes a weapon for relief of covid 19 symptoms. Hence research in these areas regarding making the patients quarantine and isolated creating the production of antimicrobial and antigens, it will provide a scope for the liberation of antigens. Researchers may put forward their effort in the further studies in this topic.

➤ **DAIVA VYAPASHRAYA CHIKITSA**

ते तु संतर्पिता आत्मवन्तं न हिंस्युः । तस्मात्
सततमन्द्रितो जनपरिवृतो नित्यं दीपोदकशस्त्र-
चन्द्रामपुष्पलाजाद्यलङ्कने वेश्मनि संपन्मङ्गलमनो-
ऽनुकूलाः कथाः शृण्वन्नासीत ॥ २५ ॥
संपदाद्यनुकूलाभिः कथाभिः प्रीतमानसः ॥
आशावान् व्याधिमोक्षाय क्षिप्रं सुखमवाप्नुयात् २६

Deepa alankrita Griha is explained in Sushruta samhita. It is treatment for 8 types of bhoota. It will increase positive energy of the house Positive results are seen in few patients (S. Su 19/25,26).

DRAVYABHUTA CHIKITSA:

➤ **EKAMOOLIKA DRAVYA PRAYOGA**

✓ **DADIMA PHALA SWARASA**

तत्फलं त्रिविधं स्वादु स्वाद्वम्लं केवलाम्लकम् ।
तत्तु स्वादु त्रिदोषघ्नं तृड्दाहज्वरनाशनम् ।
हृत् कण्ठ मुखदोषघ्नं तर्पणं शुक्रलं लघु ॥
कषायानुरसं ग्राहि स्निग्धं मेधाबलप्रदम् ।
स्वाद्वम्लं दीपनं रुच्यं किञ्चित् पित्तकरं लघु ॥
अम्लं तु पित्तजनकं आमवातकफापहम् ।

Pomegranate fruit is a good source of vitamin c, B55, polyphenols and potassium. It augments the digestive fire, loss of taste, and pittaja jwara. Also if the vit c level is maintained, it prevents viral diseases.

✓ **MATULUNGA**

बीजपुरोमातुलुनोः

रुचकः

फलपूरकः

बीजपूरफलंस्वदुरसेअम्लंदीपनंलघुरक्तपपत्तहरंकण्टजजह्वाहृदयशोधनम्श्वासकासरुचचहरंहृद्यंत्रणाहरंस्तम्
॥(भा.नन)

In Malaya, a decoction of the fruit is taken to drive off evil spirits. In Panama, they are ground up and combined with other ingredients and given as an antidote for poison. The essential oil of the peel is regarded as an antibiotic.

✓ **DRAKSHA**

तृष्णादाह ज्वरश्वास रक्तपित्त क्षतक्षयान्।
वातपित्तमुदावर्तं स्वरभेदं मदात्ययम्।।१२५।।
तिक्तास्यतामास्यशोषं कासं चाशु व्यपोहति।
मृद्वीका बृंहणी वृष्या मधुरा स्निग्धशीतला।।१२६।।

Grapes are rich in water, sugar, sodium, potassium, citric acid, fluoride, potassium sulfate, magnesium and iron. Grapes are very useful for removing the weakness of the heart. The patient should eat grapes regularly. Consumption of grapes removes phlegm accumulated in the lungs, it also helps in cough. Grapes nausea, nervousness, It is also beneficial in dizziness diseases. BreatheDisease in and airways diseases is also beneficial to use the grapes.

✓ **SOMLATHA**

Somalata or Moon plant (*Sarcostemma acidum*) existing in warmer regions in European and Asian countries like India, China, Pakistan, Srilanka, Iran has various religious and pharmacological significances.

The main ingredient is Somalata .“The divine amrutham “Somarasam” is an extract of this herb”

Botanical name : *Sarcostemma acidum*

Somlata a member of family Asclepiadaceae is believed to be close to “Soma” a divine drink that confirms immortality, had ritual importance in Indianmythological system. The use of Soma by humans is mentioned in the Rig Veda, written more than 5000 year ago, which says that soma makes us immortal, lightened, and helps to find gods.

It has kashaya rasa,laghu,ruksha gunas,katu vipaka,ushna virya,kaphavata shamaka and indicated in shwasa,shosha,trishna

Parts used:Branch,fruit

Dosage:1-2g

Actions : Bronchodialator, Vasodialator, Anti-asthmatic, Diaphoretic.

Chemical composition:Ephedrine is the major content of the plant.

Ephedra, genus of 65 species of gymnosperm shrubs of the family Ephedraceae. *Ephedra* is an evolutionally isolated group and is the only genus in the order Ephedrales (division Gnetophyta). Species are distributed in dry regions in both the Eastern and Western hemispheres.In the Western Hemisphere, *Ephedra* occurs in desert areas in the southwestern United States, in parts of Mexico, and in a wide area in South America.

Plants of the genus *Ephedra*, including *E. sinica* and others, have traditionally been used by indigenous people for a variety of medicinal purposes, including treatment of asthma, hay fever and the common cold. The alkaloids ephedrine and pseudoephedrine are active constituents of *E. sinica* and other members of the genus. These compounds are sympathomimetics with stimulant and decongestant qualities and are chemically substituted amphetamines.

✓ **KASAMARDA**

कासमर्ददलंरुच्यंवृष्यंकासविषास्तनुत ।
मधुरंकफवातघ्नंपाचनंकंठशोधनम् ।
विशेषतः कासहरपित्तघ्नंग्राहकंलघु । । भाप्र

Rasa-Tikta, Madhura

Vipak-Katu

Virya-ushna

Guna-Ruksha, laghu, Tikshna

Doshagnata :Kaphavatashamak, Pittasaraka

Karma-Ruchya,kantha shodhaka,kasa hara

✓ **KANTAKARI DWAYA**

कण्टकारीद्वयं वातामकफकासजित् ।
क्षुद्रिकायाः फलं कटु तिक्तं ज्वरापहम्॥
कण्डूकुष्ठ कृमिघ्नश्च कफवातहररन्तथा। (ध.नि)

1.Brihati (Solanum indicum)

2.Kantakari (Solanum xanthocarpum)

are described as Brihatidwaya or Kantakari dwaya.

Brihati and Kantakari are considered together,in the name of Brihati Dwaya.Among these,Brihati is larger and kantakari is smaller.

Part used:Moola,phala

It has katu-tikta rasa,laghu,ruksha,teekshna guna,ushna virya,katu vipaka,kapha vata hara

And acts as deepana,pachana,kasahara,jwaraghna,krimihara.

✓ **KARPOORA**

Botanical name: Cinnamomum camphora

Karpooora (Camphor) is a potent antimicrobial indicated in shwasa kasa, ama-jwara swarabheda,agnimandya galagraha etc.

It is an effective mukha dourgandhya hara dravya and in upper respiratory as well as in respiratory symptoms. Preparations of karpooora vis brihat karpoooradi churna are widely indicated.

It may be a drug of recommendation for the symptomatic relief of **COVID 19**.

➤ **SHAMANOUSHADHI**

CHOORNA YOGA'S

✓ **TALISADI CHURNA** (Cha.chi.8/145-148;Sha.M.6/130-148)

तालीशपत्रं मरिचं नागरं पिप्पली शुभा ।
यथोत्तरं भागवृद्ध्या त्वगेले चार्धभागिके ॥१४५॥
पिप्पल्यष्टगुणा चात्र प्रदेया सितशर्करा ।
कासश्वासारुचिहरं तच्चूर्णं दीपनं परम् ॥१४६॥
हृत्पाण्डुग्रहणीदोषशोषप्लीहज्वरापहम् ।
वम्यतीसारशूलघ्नं मूढवातानुलोमनम् ॥१४७॥
कल्पयेद्गुटिकां चैतच्चूर्णं पक्त्वा सितोपलाम् ।
गुटिका ह्यग्निसंयोगाच्चूर्णाल्लघुतराः स्मृताः ॥१४८॥
इति तालीशाद्यं चूर्णं गुटिकाश्च ।

It acts as Ruchikara,pachaka and is indicated in Kasa,shwasa,jwara,atisara

Matra:1/2 -1 Tola ; Anupana:Madhu,Ushna jala

✓ **SITOPALADI CHURNA**(Cha.chi.8/104-104; Sha.M.6/136-138)

सितोपलां तुगाक्षीरीं पिप्पलीं बहुलां त्वचम्
अन्त्यादूर्ध्वं द्विगुणितं लेहयेन्मधुसर्पिषा १०३
चूर्णितं प्राशयेद्वा तच्छ्वासकासकफातुरम्
सुप्तजिह्वारोचकिनमल्पाग्निं पार्श्वशूलिनम् १०४

It acts as deepana,pachana,dahashamaka and is indicated in Kasa,shwasa, jwara,kshaya, agnimandya.aruchi,

Matra : 1karsha ; Anupana –Madhu

✓ **RAJANYADI CHURNA**(A.H.U.2/37-40)

रजनीदारुसरलश्रेयसी बृहतीद्वयम् ३८
पृश्निपर्णी शताह्वा च लीढं माक्षिकसर्पिषा
ग्रहणीदीपनं श्रेष्ठं मारुतस्यानुलोमनम् ३९
अतीसारज्वरश्वासकामला पाण्डुकासनुत्
बालस्य सर्वरोगेषु पूजितं बलवर्णदम् ४०

It acts as agnideepaka,vatanulomaka, and is indicated in jwara,kasa,atisara.

Matra -1-3 grams ;Anupana -Madhu,Ushna Jala

✓ **HARIDRA KANDA**(B.R.55/12-16)

हरिद्रायाः पलान्यष्टौ षट्पलं हविषस्तथा ।
क्षीराढकेन संयुक्तं खण्डस्यार्धशतं तथा ॥१२॥
पचेन्मृद्वग्निना वैद्यो भाजने मृन्मये दृढे ।
त्रिकटुश्च त्रिजातश्च कृमिघ्नं त्रिवृता तथा ॥१३॥
त्रिफला केशरं मुस्तं लौहं प्रति पलं पलम् ।
सञ्चूर्यं प्रक्षिपेत्तत्र तोलकार्धं तु भक्षयेत् ॥१४॥
कण्डूविस्फोटदद्रूणां नाशनं परमौषधम् ।
प्रतप्त काञ्चनाभासो देहो भवति नान्यथा ॥१५॥
शीतपित्त उदरं कोठान् सप्ताहादेव नाशयेत् ।
हरिद्रानामतः खण्डः कण्डूनां परमौषधम् ॥ १६॥

It acts as agnideepana,pachana,shothahara,jwarahara.

Haridra kanda has Rasayana,Jeevaniya,Balya,Brimhaniya,Ojovardhaka,Ayurvardhaka,Dhatu poshaka properties which indirectly increase the Vyadhikshamatav.

Matra -6 grams ;Anupana – Madhu, Ushna Jala

✓ **KARPOORADI CHURNA**(Sahasrayoga,Churna Prakarna,30)

कर्पूरचोचतक्कोलजातीफलदलासमाः ॥

लवंगनागमरीचकृष्णाशुंठीविवर्धिताः ॥

चूर्णसितासमंहृद्यंरोचनंक्षयकासजित्।

It acts as vata-kapha shamaka, rochaka, hridya and is indicated in kasa, kshaya.

Matra -1-3 grams ; Anupana - Ushna Jala

✓ **AMALAKI CHURNA**(Cha.Su.27/147,Dhanwantari nighantu)

विद्यादामलके सर्वान् रसाल्लवणवर्जितान्॥१४७॥
रूक्षं स्वादु कषायाम्लं कफपित्तहरं परम्।

Pancharasa, sheeta virya, madhura vipaka, tridosha hara

Rogakarma : Rasayana, hridya, atisara, kasa, jwarahara

Amalaki is a rich source of vitamin C and good anti-oxidant .

VATI:

✓ **SHWASANANDAM GULIKA** (Arogyaraksha kalpadrumam)

Shwasanandam gulika is mentioned in Arogyaraksha kalpadrumam as a remedy for kasa, shwasa, hikka.

Matra -1 (125mg)-2 tablets ; Anupana - Ushna Jala

KASHAYA YOGA:

✓ **AMRUTTOTARA KASHAYA**(Sahasrayoga kashaya prakarna 30)

Deepana, pachana, tridosha hara, srotoshodhaka, vatanulomaka

Roga karma: Sarva jwarahara, pratishyaya, ama, ajeerna

ASAVA-ARISHTA:

✓ **KANAKASAVA**(B.R.16/115-119)

सङ्क्षुद्य कनकं शाखामूलपत्रफलैः सह ।
ततश्चतुष्पलं ग्राह्यं वृषमूलत्वचस्तथा ॥९८॥
मधुकं मागधी व्याघ्री केशरं विश्वभेषजम् ।
भाईगी तालीशपत्रञ्च सञ्चूर्णैषां पलद्वयम् ॥९९॥
सङ्गृह्य धातकीप्रस्थं द्राक्षायाः पलविंशतिम् ।
जलद्रोणद्वयं दत्त्वा शर्करायां तुलास्तथा ॥१००॥
क्षौद्रस्यार्द्धतुलाञ्चापि सर्वं सम्मिश्र्य यत्नतः ।
भाण्डे निक्षिप्य चावृत्य निदध्यान्मासमात्रकम् ॥१०१॥
निहन्ति निखिलान् श्वासान् कासं यक्ष्माणमेव च ।
क्षतक्षीणं ज्वरं जीर्णं रक्तपित्तमुरःक्षतम् ॥१०२॥

It is indicated in kasa,shwasa,rajyakshma,raktapitta.

Matra -10-20ml; Anupana - Ushna Jala

✓ **DHATRYARISHTA** (Cha.chi16/111-113)

धात्रीफलसहस्रे द्वे पीडयित्वा रसं तु तम् ॥१११॥
क्षौद्राष्टांशेन संयुक्तं कृष्णार्धकुडवेन च । शर्करार्धतुलोन्मिश्रं पक्षं स्निग्धघटे स्थितम् ॥११२॥
प्रपिबेन्मात्रया प्रातर्जीर्णे हितमिताशनः । कामलापाण्डुहृद्रोगवातासृग्विषमज्वरान् ॥११३॥
कासहिक्कारुचिश्चासांश्चैषोऽरिष्टः प्रणाशयेत् ।

इति धात्र्यरिष्टः ।

Charaka has mentioned Dhatriyarishta in Pandu rogadohikara.It is also indicated in Shwasa,kasa,aruchi,vishama jwara,etc.

Matra-10-20ml

✓ **TULASI ASAVA**

पीतो मरिच चूर्णेन तुलसीपत्रजो रसः ।
द्रोणपुष्पीरसो वापि निहन्ति विषमज्वरान् ॥ सा.म.ख. 1/10

Vishama jwara, Shwasa, kasa hara

✓ **MRIGAMADASAVA**(B.R.5/706-707)

मृतसञ्जीवनी ग्राहया पञ्चाशत्पलसम्मिता ।
कस्तूरी कुडवं तत्र मरिचं देवपुष्पकम् ॥७०६॥
जातीफलं पिप्पली त्वग्भागं द्विपलिकं तथा ।
मृद्गाण्डे तु विनिक्षिप्य निरुध्य तन्मुखं दृढम् ॥७०७॥
सप्ताहं स्थापयेत् यत्नात् पूतीकुर्यात् च वाससा ।
विसूचिकायां हिक्कायां त्रिदोषप्रभवे ज्वरे ।
वीक्ष्य कोष्ठं बलञ्चैव भिषङ् मात्रां प्रयोजयेत् ॥७०८॥
भैषज्य रत्नावली ज्वराधिकार ७०६-७०८

Mrigamada means musk.

It is indicated in sannipataja jwara, visuchika, hikka, atisara

Matra-4-16 drops; Anupana-Ushna jala.

✓ **DRAKSHASAVA**(B.R.9/170-174)

द्राक्षा पलशतं दत्त्वा चतुर्द्रोणोऽम्भसः पचेत् ।
द्रोणशेषे रसे तस्मिन् पूते शीते प्रदापयेत् ॥१७०॥
शर्करायास्तुलां दत्त्वा तत्तुल्यं मधुनस्तथा ।
पलानि सप्त धातक्याः स्थापयेदाज्यभाजने ॥१७१॥
जातीलवङ्गकक्कोल लवलीफलचन्दनैः ।
कृष्णात्रिगन्धसंयुक्तैर्भागैरर्द्धपलांशकैः ॥१७२॥
त्रिसप्ताहाद्भवेत् पेयं तस्य मात्रा यथा बलम् ।
नाम्ना द्राक्षासवो ह्येष नाशयेद् गुदकीलकान् ॥१७३॥
शोकारोचकहृत्पाण्डू रक्तपित्त भगन्दरान् ।
गुल्मोदरक्रिमिग्रन्थि क्षतशोषज्वारन्तकृत् ।
वातपित्तप्रशमनः शस्तश्च बलवर्णकृत् ॥१७४॥

Matra-12-25ml,Anupana-Ushna jala

Indicated in jwara,rajayakshma,krimi,pandu,etc.

✓ **MRIDWIKARISHTA**(B.R.14/73-76;Sha.M.10/69-72)

द्राक्षातुलार्धं द्विद्रोणे जलस्य विपचेत् सुधीः ॥६९॥
पादशेषे कषाये च पूते शीते विनिक्षिपेत् ।
गुडस्य द्वितुलां तत्र त्वगेलापत्रकेशरम् ॥७०॥
प्रियङ्गुर्मरिचं कृष्णा विडङ्गं चेति चूर्णयेत् ।
पृथक्पलोन्मितैर्भागैस्ततो भाण्डे निधापयेत् ॥७१॥
समन्ततो घट्टयित्वा पिबेज्जातरसं ततः ।
उरःक्षतं क्षयं हन्ति कासश्वासगलामयान् ॥७२॥
द्राक्षारिष्टाह्वयः प्रोक्तो बलकृन्मलशोधनः ।

It is indicated in kasa,shwasa,kshaya,gala rogas.

Matra-12-25ml;Anupana-Ushna jala

RASOUSHADHIS

<i>Sl. no</i>	<i>Rasoushadhi</i>	<i>Ingredients</i>	<i>Indication</i>
1	Sameera pannaga rasa	Parada, gandhaka, Malla, haratala, Manashila	Asadhya vyadhi, Jwara, Shwasa, Srotolekhana in Shwasa and Kasa.
2	Mallasindhura	Parada, Rasakarpoora, Gandhaka, malla.	Shwasa Tridoshaja vyadhi
3	Shringarabhra	Parade, gandhaka, tankana, nagakeshara, karpooora, Jatikarsha, lavanga, teja patra, Swarna Bhasma Abhraka Bhasma, Kushta, Jatamamsi, Twak, Dhatakipushpa, Ela, Shunthi, Maricha, Pippali, haritaki, Vibhitaki, gajapippali, Amalaki	Rajayakshma, Agnimandya, Kasa, Shwasa
4	Kaphaketu rasa	Tankana, magadhi, Shanka Bhasma, Vatsanabhi, Shunthirasa	Shwasa, kasa, Tridoshahara
5	Rajamruganka rasa	Swarna Bhasma, Kantaloha bhasma, Parada, Abhraka, Pravala, Mukta Bhasma, Vibhitaki Kwatha	Rajayakshma, Kasa, shwasa, Dhatukshaya, Jwara
6	Bhagottara Rasa	Parada, Gandhaka, Pippali, haritaki, Vibhitaki, Vasa, Babbulu patra swarasa	Shwasa, kasa, Jwara
7	Mahalakshmi vilas rasa	Parada, rasa sindhura, haratala, manashila, kharpara, vangabhasma, tamra bhasma, abhraka bhasma, kanta loha bhasma, kansya bhasma	Sarva kasa nashaka, Kshaya, kasa, Shwasa, Jwara, haleemaka,
8	Mrutyunjaya rasa	Gandhaka, hingula, vatsanabhi, maricha, pippali,	Pneumonia, Shwasa, Jwara,
9	Manashiladi dhooma	Manashila, haratala, mareecha, jatamansi, shun thi, ingudiphala,	Asadhya kasa, Sarvadoshaja kasa hara,
10	Kshayakesari rasa (Bruhat)	Abhraka, parade, Loha, Tamra, naga, Kansya, mandoora, Vimala, Roukshya makshika, Vanga, Kharpara, haratala, tankana, Swarnamakshika, Vaikranta, pravala, mukta, hingula, kanta pashana Bhasma, Gandhaka	Sannipatika jwarahara, Shoshahara Krimi hara, krimijanya Rogahara, Shwasa, kasa, rasayana,

RASAYANA:

Sl. No	Rasayana	Characteristics
1	Vardhamana pippali/ Pippalli Rasayana Ref: Charaka Chikitsa1.3/36-40	<p>PippaliVardhamanaRasayana is rejuvenating therapythat can be helpful as Pippali has anti-inflammatory, anti-asthmatic, anti-oxidative and immune-modulatory actions. So, thistherapy can be useful in relieving the symptoms like shortness of breath and further damage to the lung tissue.The use of Pippali in increasing and tapering doses is known as “VardhamanaPippali”. It is very effective because it can be administered in its maximum doses without any discomfort to the patient. Pippali alleviates Ama (endogenous waste material), the factor responsible for development of autoimmune disorders in the body, resulting in the correction in immune system activities. Thus, because of all these actions together, it plays an important role in the Samprapti- vighatana (Agitating pathogenesis) of COVID 19.</p>
2	Amalaki Rasayana Ref:BhavaprakashaNi ghantu, harityakyadi varga/39-40	<p>Amalaki rasayana contains the Amalaki (Phyllanthus emblica Linn.), sugar, ghee and honey. Amalaki has been mentioned as the best rasayana drug and vaya sthapana in Ayurvedic classics. Also amalaki is known by the name as ‘dhatri.’ It contains vitamin-C, so it acts as antioxidant. It is not having any other side effect too, easy to prepare, there is very less harmful action. Amalaki is having highly medicinal value.</p>
3	Agasthya hareetaki Rasayana Ref: Cha. Chi.17/57-62	<p>Most of the ingredients of Agastya Haritaki Rasayana are having -Tikta, Kashyaya, Madhura rasa, laghu, ruksha, tikshna guna, katu vipaka, ushna veerya and having kaphavata shamaka properties. Thus, Agastya Haritaki Rasayana is used in the management of diseases which are mainly vata-kapha pradhana. Agastya Haritaki Rasayana is indicated as main line of treatment in Shwasa, Kasa roga as well as used as the Naimittika Rasayana in various other diseases like grahani, aruchi, arsha etc</p>
4	Chyavanaprasha Rasayana	<p>Supports healthy function of the heart and respiratory systems, tonifies the reproductive system and kindles Agni. All the ingredients in the</p>

	<p>Ref: Cha.Chi. 1/62-74</p>	<p>Chyavanaprasha have been scientifically studied individually for their health benefits. Chyavanaprasha is helpful in clearing the accumulated excreta by promoting digestion and excretion. It relieves cough, asthma, bronchospasm, tuberculosis and respiratory tract infections. It is an immune modulator drug. It is digestive which improves absorption and assimilation. If one wants to attain longevity, memory, intelligence, freedom from illness, youthfulness, excellence of lustre, complexion and voice, optimum strength of physique and sense organs, perfection in deliberation, respectability and brilliance then he should consume Chyavanaprasha on daily basis.</p>
<p>5</p>	<p>Vyaghri Hareetaki Ref:Bhaishajya Ratnaavalikasarogad hikara/43-46</p>	<p>Two main ingredients of <i>Vyaghri Haritaki Avaleha</i> are <i>Haritaki</i> and <i>Kantkari</i>. <i>Haritaki</i> has <i>Tridoshshamaka</i> property and <i>Kantkari</i> has <i>Kapha-Vatahara</i> property. Both the drugs have <i>Kapha-Vatahara</i> properties. <i>Kantkari</i> is an immunostimulating agent. <i>Haritaki</i> also has immunomodulatory activity. <i>Haritaki</i> is having <i>Shothahara</i> and <i>Rasayana</i> property also. Medicines of the <i>Rasayana</i> group are believed to promote health, immunity, and longevity. <i>Prakshepa Dravyas-Trikatu</i> and <i>Chaturjata</i> have <i>Ushna- Tikshna</i> properties, which promote <i>Agni</i>, indirectly help in absorption and metabolism of active principles. <i>Trikatu</i> helps to increase the bioavailability of the medicine and more over removes the <i>Srotorodha</i> at the cellular level. <i>Trikatu</i> is the best bioavailability enhancers, which helps in maintaining the major therapeutic principles in the systemic circulation for longer duration and they are good <i>Anulomana</i>, <i>Deepana</i> and <i>Pachana Dravyas</i> and subsides the aggravated <i>Vata</i>. <i>Trikatu</i> possesses potential immunomodulatory activity and has therapeutic potential for the prevention of autoimmune diseases. <i>Madhu</i> has <i>Kaphahara</i> and <i>Chhedana</i> properties. <i>Guda</i> is also used in this formulation and <i>Haritaki</i> with <i>guda</i> is said to be <i>Tridoshahara</i>.</p>

➤ **DEEPANA PACHANA DRAVYAS**

- ✓ **VAISHWANARA CHURNA** (Chakradatta Amavata Chikitsa 15-18,Sahasrayoga,Ashtanga hridayam)

It was also recommended for use as Deepana (appetizer), Pachana (digestive), Vedana shamaka (analgesic), Shotha prasamana (anti-inflammatory) and Vatanulomana.

- ✓ **SHUNTI CHURNA**(Bhava Prakasha-Haritakyadi Varga)

Shunti is katu rasa,laghu snigdha guna,ushna virya,madhura viapaka,kapha-vata shamaka, anulomaka, deepana, paachana, aamdoshahara,hridya.

Shunti mainly acts on Tamaka Shwasa by its Vatakaphahara and Ushna Veerya properties. Its bhedana karma mainly helps in Kapha Bhedana and helps in clearing Marga Avarana caused by Kapha and providing easy movement of Vayu.

➤ **SHODHANA KARMA**

NASYA

The Acharyas said – “*NASA HI SHIRASO DWARAM*” .Nasa has been considered as the gateway of Shirah. And to uproot the deep seated morbid Doshas, Nasya therapy has been recommended by almost all the Acharyas.

Urdhvajatrugata Rogas and their management have a special place in Ayurveda. Shirah being the prime seat of knowledge and also the prime controller of the entire body has been termed as Uttamanga. Hence, the diseases occurring in the Urdhvajatru have been very clearly highlighted in the Ayurvedic classics along with their management. Nasa is considered to be that Indriya, whose functions are not only limited to respiration but is also considered as a pathway for drug administration. In Ayurveda, special procedure called Nasya has been mentioned.

Charaka's Classification of Nasya

According to Charaka, the Nasya is of five types viz. Navana, Avapida, Dhmapana, Dhuma and Pratimarsha.

Pratimarsha Nasya (Cha.Si.9/116-117)

Pratimarsha Nasya can be given daily and even in all the seasons at morning and evening. It is given by dipping the finger in the prescribed Sneha and then instilled into the nostrils. The patient should be advised not to sniff the Sneha given in the form of Nasya. It does not require any poorva karma.

Dose: 2 drop in the morning and evening.

Indications :Pratimarsha can be given in any age, any season and even in Akala. i.e in Varsha and Durdina. It can be given to Bala, Vridhdha, Bhiru, Sukumara and weak patients and also to the patients of Kshataksheena, Trishna Pidita, Mukhashosha, Valita and Palita.

Contraindications: It is contraindicated in Dushta Pratishyaya, Bahudosha and Krimija Shiroroga and also in Madhyapi (drunkershabitual), Badhriya (deafness) and the persons having Utklishta doshas. It should not be given to them because the Sneha Matra is quite insufficient to eliminate doshas or krimi ; causes further aggravation of doshas.

Mode of action of Nasya Karma

The clear description regarding the mode of action of the Nasya Karma is not available in Ayurvedic classics. According to Charaka, Nasa is the gateway of Shirah. The drug administered through nose as Nasya reaches to the brain and eliminates only the morbid doshas responsible for producing the disease. In Ashtanga Sangraha, it is explained that Nasa being the door way to Shira (head), the drug administered through nostrils, reaches Shringataka (a Sira Marma by Nasa Srota and spreads in the Murdha (Brain)) taking route of Netra (eye), Shrotra (ear), Kantha (throat), Siramukhas (opening of the vessels) etc. and scratches the morbid doshas in supra clavicular region and extracts them from the Uttamanga.

NASYA YOGA'S

TAILA YOGA'S

✓ **SURASADI TAILA NASYA** (Astanga Hridayam)

Most of the ingredients of surasadi taila has katu,tikta rasa,ushna veerya and laghu,ruksha,teekshna guna.It has vata kapha hara,snehana,shotha hara,sravahara properties hence is capable of doing samprapti vighatana in vataja pratishyaya which is one of the feature seen in COVID 19.

✓ **KRIMINASHAKA NASYA** (A.H.24/16)

- NIMBA TAILA NASYA (A.H.24/17)-Tikta,kriminashaka,kaphanashaka
- VIDANGA TAILA NASYA (A.H.24/16)

➤ **Swarasa Yoga as avapida nasya**

✓ **TULASI SWARSA** (Sha.M.1/10)

Action:Kaphavata hara,deepana,pachana

Uses:Kasa,shwasa,jwara

➤ **ChurnaYoga's as dhmapana nasya**

Dhmapana nasya is a type of shodhana nasya where fine powder is administered/instilled (blown) into the nostril with the help of Nadi Yantra,open both side.

✓ **SHIRISHA CHURNA** (Kayadeva Nighantu)

Tikta, Kashaya, Madhura, Katu rasa,Laghu, Tikshna, Ruksha guna,Seeta virya,Katu vipaka, Tridosha shamaka, Shwasa, Kasa.

Shirisha beeja churna is indicated as shirovirechana (nasya) Shiraha shoola, Ardhavabhedaka. (Cha.Su.2/5).

✓ **PALASHA CHURNA** (Bhavaprakasha Nighantu)

Deepana,pitta-kapha hara,kriminashaka

DHUMA NASYA

Dhuma nasya is defined as medicated smoke inhaled through nose and exhaled through oral route.

Types:

Prayogika-Drugs like Priyangu,Ushira etc should be used.

Snehika- Drugs like Vasa,Ghrita etc should be used.

Virechanika- Drugs like Aparajita,Apamarga etc should be used.(Cha.Su.5/20-26).

Dose:During the prescribed time,a wise person should smoke twice for Prayogika dhuma,once for snehika dhuma and 3-4times for virechanika dhuma.

???Can DHATURA be used as a dhoomavarti!!

Datura is included one among the upavisha by laghutrayees, except sharangadhara samhitha. In Ayurvedic literatures, Datura is described as a useful remedy for various diseases like jwara, kushta, krimi, visha.

This plant is used as a whole in therapeutics. Its leaf, flower, and seed are also used individually for different purposes. Generally, datura seeds are used in Ayurveda, traditional Indian and alternative medicines. Before using datura in medicines, datura seeds require a series of detoxification and purification processes. These processes help to reduce the toxicity level in the human body and enhance medicinal value of datura. In raw form, datura seeds might be very dangerous and poisonous

Plant Parts Used-beeja,pushpa,moola and patra.

Tikta,katu rasa.laghu,ruksha guna,ushna virya,katu vipaka,kapha-vata shamaka,jwaraghna

Haridra dhoomavarti (A.H.7/10)

Haridradi dhooma is one of the dhooma preparations mentioned in Caraka samhita swasa hidhma chikitsa adhyaya. It is a herbomineral preparation commonly used in clinical practice and it is observed that this yoga gives sudden relief of symptoms for persons with bronchitis and in persons with many infectious conditions. This yoga has drugs like haridra, manasila etc having teeksna, ushna, ruksha and lekhaneya gunas. Dhooma pana yogas in general are found to be having quick action in smaller dose itself. In addition to that, inhalation by dhooma varthi ensure the uniformity in inhaling fumes. It is a herbo mineral preparation containing drugs haridra, patra, erandamoola, laksha, manashila, devadaru, haratala and jatamamsi.

Similar yoga is found in Caraka samhita swasa hidhma cikitsa adhyaya.

Yashtimadhu siddha dhoomavarti (A.H.22/13-16)

Yashtimadhu Churna can be used in the form of its Kanthya/ Swarya and soothing property which will improve voice tone and quality of voice

Sushruta has mentioned Kasaghna dhoomavarti in dhumanasya kavalagraha chikitsa adhyaya (Su.chi40/4) which includes drugs like Brihati, kantakari, trikatu, kasamarda, hingu, ingudi, twak, manashila, chinnaruha (guduchi), karkatshringi.

DHOOPANA AND ANJANA PRAYOGA IN JEERNA JWARA

When jeerna jwara is twacha shesha (i.e. manifested only in twak) and has agantuja anubandha, then Dhoopana and anjana yogas are beneficial.

RUKSHA VIRECHANA

The employment of Virechana karma with no or minimal prior preparation of the client with Abhyantara Snehana is called by the name Ruksha Virechana. According to Acharya Charaka, the individual with excessive Sneha in the body should never be given Snigdha Virechana. The body with excessive Sneha should be treated with Ruksha virechana only.

✓ **TRIVRIT LEHA (A.H.K.2/9)**

Trivrita (*Operculina turpethum*) is best drug for virechana. It is good for all persons as it is sukha virechaka. Trivrit has laghu, ruksha, tikshna gunas, katu tikta ras, ushna virya and pittaghna property. Lehya yogas of trivrit are used as virechana mentioned in charak samhita.

✓ **AVIPATTI CHURNA**(Sahasrayoga,Churna Prakarna,73)

Avipatti churna is one such unique combination 11 of drugs which expels the vitiated pitta dosha outside the body thus balancing pitta and increasing Agni.The paroxysmal nature of the cough indicates its having the Swabhava of Pitta. In Pittaja kasa, Satata kasa vegam is mentioned. The productive cough with white and thick sputum represents the nature of Kaphaja kasa i.e. Ghana snigdha shwetha sleshma pravartanam is mentioned as a Lakshana of Kaphaja kasa. The symptoms of COVID 19 like cough and running nose shows the Prakopa of Kapha and Pitta dosha respectively. There is presence of Mala rupi kapha resulting from Ama or Rasa dhatwagnimandyam. Virechana being a proper Shodhana therapy for both Pitta and Kapha. The treatment is mainly focussed on the Nirharana of the excess Mala rupi kapha, thereby bringing Srotoshodhana in the Pranavaha srotas.

WHETHER VAMANA KARMA HAS ANY ROLE IN THE PREVENTION OF COVID 19??

Though vamana karma is indicated in nava jwara/nava pratishaya as well as when the dosha are located in amashaya through the nearest route of expulsion therapeutic emesis is advised as per classical texts. In vasanta ritu Vamana is best practiced; however for akanta panartha if the proyoga of nimba jala , patola kashaya , yastimadhu phanta etc may be advocated. Proyoga of neelakanta rasa for ashuyojana of vamana (sadyovamana) may be adopted. Vagbhatokta sidhartaka kana dhatryadi yoga (heena vege sidharthaka kana dhatri...) may be employed. This should be a part of ritu shodhana. In true cases of corona virus infection with the manifestation of covid 19 symptoms conducting vamana may not be safer. The body fluids, salivary secretions and the vomitus ; their handling and waste management becomes a big task. Moreover if a patient is running hyper pyrexia, patients co-operation , compliance also should be thought of. Team of expert vaidyas, paricharakas are required for the monitoring of vamana karma. When a patient is highly infected the risk factor about the volunteers involved in the procedure should seriously be looked into.



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॥श्री॥

आयुर्वेदोक्त करोना व्याधि निदान पञ्चक एवं चिकित्सा

व्याख्या

चीनदेशेभद्वम् व्याधिं प्रज्ञापराध निमित्तजम्।
भूताभिषंगात् आर्यावर्त जनसमुहसुपीडकम्॥१

करोना नाम यः रोगं विश्वव्याप्तमिदम् गदम्।

करोना नाम व्याधिजनन प्रसंग वर्णने चीनदेशेभद्वम् इत्याह।

करोना नाम अधुना व्याधिः प्रथमतः चीन देशे जातम्, तस्य जननस्य प्रधान कारणं प्रज्ञापराधः इति वक्तव्यम्। तथा च भूताभिषंग इत्यादि उत्पादक कारणं दर्शयन्नाह । भूताभिषंगात् इति, भूत अनुषंगात् वा कृमिजन्यः। आर्यावर्त इति भूमण्डल स्थितम्। जनसमूह पीडकम् इति विश्वास्थित सकल देशव्यापीमनुकुल पीडकम् नतु प्राणिपक्षीः इत्यादि॥

सामान्य निदान

करावलंबनम् स्वेदमलं शरीरज द्रवक्लेदम्च तत्॥२

मलिनाहारशीलात् अणुजन्तुः क्षवथुवेगादपि च यत्।

जनपदोर्ध्वंस हेतुना केचित् सुसूक्ष्माद दर्शनादपि॥३

यथोक्तं कारणं अत्र अधुना गद कारकम्।

सामान्य निदानम् इत्याह । करावलम्बनम् इति हस्तलाघवम्, स्वेदमलं इति शब्देन, प्रधानतः स्वेद एव कारणं इति। द्रवक्लेदनम् इति, लालास्राव, नासास्राव, तथा कासकाले मुखेन पतित



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द्रवम्। मलीनाहारशीलात् इति अग्निवेश संहितायाः उक्त अष्टविध आहार विधिविशेषायतन अपालनात् तथा ऋतु अनुसार आहारादि क्रियाक्रम अपालनात्। अणुजन्तुः इति आधुनिक सूक्ष्मक्रिमिविज्ञान विषये दर्शित विविध जन्तवः, तस्य अणुस्वरूपः। क्ष्वथुवेगादपि इति क्ष्वथुकाले निष्पतित मुख, गल, नासागत क्लेदः। जनपदोर्ध्वंस हेतुना इति कायिक, वाचिक तथा मानसिक अधर्मः इत्यादि। सुसूक्ष्म दर्शनादपि इति, सूक्ष्मदर्शक यन्त्रेण दृश्य कृमिः। अधुना इति प्रसक्तः।

विशेष निदान

पुनर्विशेषतः तत्र कारणं च प्रसंगम् तत्॥४

स्पर्शनं श्वासोच्छ्वासं समूह सहभोजनम्।

शय्यासन सुखश्चैव वस्त्रमाल्यानुलेपनम्॥५

यथोक्तं कारणं चैव संक्रामान्त्यौपसर्गिकम्।

विशेष निदानम् इत्याह स्पर्शनं इत्यादि। स्पर्शनम् इति अनेक कारणेन परस्पर संस्पर्शः। समूह सहभोजनम् इति विवाहोपनयनादि समारंभे प्रभूत जनसमूहे युक्तम् इति उच्छिष्टादि मिलनम्। शय्यासनम् इति शयनोपयुक्त सामान्य आसनम् अशुद्धम्। सुखश्च इति मैथुनादिभिः। वस्त्रमाल्यानुलेपनम् इति एकेन उपयुक्त वस्त्र, माल्यानुलेपनादीनां अन्येन यथास्थितिना पुनः उपयुक्तम्। संक्रमन्त्यौपसर्गिकम् इति औपसर्गिक रोग संक्रमम्।

संप्राप्ति

मारुतः प्राणवहाहिनि स्रोतांसि संप्रकुप्यन्ति ॥६
उरोगतः श्लेष्मोद्दिष्टम् प्रतिश्यायं श्वासं जनयति।
सम्प्राप्तः सन्निपातितः प्रदुष्टा कुपिताः मनाः ॥७



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रसाख्यं धातुं प्रविश्य पक्तिस्थानात् विरस्यति।

अरोचकं अंगमर्दं च तीव्रं ज्वरं करोति सः ॥८

इदम् निदान जातं यः लक्षणानि पृथक् श्रुणुः।

संप्राप्ति दर्शयन्नाह मारुतः इत्यादि । मारुतः इति वातावरणास्थित वायुः तथा प्रधानतः प्राणवातः । उरोगतः श्लेष्मोद्दिष्टम् इति उरस्थानस्थित फुफ्फुसादि अंगः। जनयति इति उत्पादयति । संप्राप्तः सन्निपातितः इति पृथक् तः वातदी प्रकोप निदान, लक्षणयुतः। कुपितो मनाः इति विकृत मनोधर्मः कुपितः इति पदेन सामान्येन दोषादीनां वृद्धम् वा क्षीणं वा गृह्यन्ते विकृति मात्रं हि कोपः इति आयुर्वेददिपिका याः चक्रपाणिनः शारीरस्थाने उक्तम् (च.शा.६/१७, ठीक)

रसाख्यं धातुम् प्रविश्य इति रसधातुः तथा रस वहस्रोदुष्टीः प्रथमतः। प्रविश्य पक्तिस्थानात्, इति, अग्नि स्थान प्रवेशेन अग्निमान्द्यम् करोति इति। विरस्य इति प्रसरति अथवा विकृतिं उत्पादयन्ति। दुष्टरसादि धातुना अंगमर्दादि लक्षण पूर्वकम् करोना व्याधिं उत्पादयन्ति।

लक्षण

प्रतिश्याश्च कासश्च ज्वरः श्वासश्च एव च ॥९

अंगमर्दं सन्धिशूलं च रूपम् आगन्तुजोद्भवम्।



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पृथक लक्षणानि प्रतिश्याय कास ज्वर इत्यदि ।

प्रतिश्यायः - जलीय नासास्राव, कासः इति कसनात् कासः । ज्वरः इति देहोश्मा वृद्धिः तथा मनो सन्तापः । श्वासः इति श्वासरोगाधिकारेषु उक्त लक्षणः अंगमर्दः इति सर्वांग निष्पिडनवत् रुजा। सन्धिशूलम् इति अतिव चलनादि सहित सन्धयः यथा जानु, कुर्पर , मणिबन्ध , ग्रीवा इत्यादि । रूपम् इति व्यक्त लक्षणम् । आगन्तुजोद्भवम् इति चतुर्विधं आगन्तुज कारणानि यथोक्तं ज्वरनिदाने । यद्यपि आगन्तजः इति आगन्तु कारण जनितः इति अभिचारः , अभिषंगः , अभिशापः, अभिघातः इत्यादि चतुर्विधे अभिचारः , अभिषंगः प्रधानम् ।

चिकित्सा सुत्र -

दीपनं पाचनं चैव उष्णं लघु भोजनम्॥१०

स्नानं स्वशुचिम् चैव ज्वर कास भैषज्यसंग्रहम्।

करोना ज्वर दमनार्थं सामन्य चिकित्सा सुत्रमाह दीपनं इत्यादि । दीपन पाचनं इति अग्नि संधुक्षणम्। स्वशुचिम् इति वैयक्तिक् देहशौचम् तथा वासस्थल वातावरण् शौचम्। यथा धुमादि प्रयोग कृमिनाशनार्थं।

कास भैषज्यसंग्रहं इति चुर्ण , वटि , कषाय , लेह्य इत्यादि

लक्षणानुसारेण विविध कल्पनानि प्रयोगे यथोक्तं कासाधिकारे॥

उपशय- अनुपशय

शैत्यागारं हिमस्पर्शं अभिष्यन्दि गुरु भोजनम् ॥११

अनुपशयं तु यत्प्रोक्तं एकोन विंशति कोविदे ।
उष्णांबुपानंसुखोष्ण स्नानं दीपनं पाचनामृतम् ॥१२



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उपशयम् इति तत्प्रोक्तं कोरोनातंक ज्वर निवारणम् ।
उपशयानुपशयं वक्तुमाह ॥ शैत्यागारं हिमस्पर्श - शीत जल , शीत आहार पदार्थ
तथा शीत मारुतस्पर्शम् ॥ उष्णाम्बु पानादि शब्देन् उपशयमुक्तं ।

अरिष्ट लक्षण -

सर्वाङ्ग वैकल्यं फुफ्फुस शोथंस तीव्र ज्वर पीडनम् ॥१३

असाध्यमिच्छन्ति ब्रूवन्ति रोगिः मरण मार्गिणम् ।

सर्वाङ्ग वैकल्यं इति तीव्रतः व्यक्त व्याधी लक्षणम् । फुफ्फुशोथम् इति उरःस्थानास्थित
कफस्य विकृतितः रोगकारक वृद्धिम् ।

मरणमार्गिणम् इति असाध्य वा अरिष्ट लक्षणयुक्तम् ॥

चिकित्सा योग

सुरभीममूत्रप्रयोगं च मद्य अरिष्ट आसवं च तथा ॥१४

सीधु तुषोदकं चैव स्वरासान् वा कषायान् अपि ।

पुराणशाली प्रयोगं च कवल गन्डूष तत्परः ॥१५

यथोक्तं पथ्यमभ्यस्तं करोना ज्वर निवारणम् ।

सुरसा निशायुक्तं च स यष्टीमधुमरिचकम् ॥१६

किराततिक्तं बिल्वपत्रं च गुडुची नागरान्वितम् ।

एतानि युक्तं प्रत्येकं एकांशे कृतकषायकम् ॥१७



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पिबन्ति मुहुः तत्र करोना प्रतिबन्धकम् ।

सुरभीमुत्रप्रयोगं इति गोमुत्र प्रयोगं, मद्यादि औषधीय सुरा गण प्रयोगं। स्वरसान् – तुलसी , निम्ब इत्यादि स्वरसः।

कषायान् – कास , ज्वर शामक प्रयोगं। पुराणशाली – पुराण शष्ठीक शाली । कवल गन्धूषः इति मुखशुद्ध्यर्थकषाय, तैल, स्वरसादि प्रयोगम् । तत्पर्ः इति – दिनचर्या, ऋतुचर्यादिअध्यायो संबधित विषय त्यागम् पालकः यथोक्तं पथ्यमभ्यस्थम् इति प्रायः, यद् पथ्येन दोषदुष्य विकृति निवारणार्थम्॥

सुरसादि शब्देन चिकित्सापयोग द्रव्यादीनां वक्तुं आह।

सुरसा- तुलसि । प्रत्येकं एकांश इति समान पमाणेन सुरसादि द्रव्यम् उपयुक्तम्। कृतकषायम् इति पंचविधकषाय कल्पना प्रकरणे उक्त कषाय निर्माण विधिना कृतं श्रुतम्॥ पिबन्ति मुहुः इति पुनः पुनः पेयोपयोगम्। अत्र करोना व्याधिः प्रधानतः प्राणवह स्रोतो दिष्टिजन्यम् तत्र, औषध सेवनकाल प्रकरणे , यथोक्तं , प्राणेप्रदुष्टे तु मुहुःमुहुः इति वाच्यम्, तत् च प्रयोज्यं व्याधि प्रतिबन्धनार्थम्॥



HubliAyurvedSevaSamiti's
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प्राचार्याः तथा कायचिकित्सा विभागाध्यक्षः वैद्य प्रशान्त ए. एस्
महोदयेन कृतः, स्नातकोत्तर विभाग सचिवः तथा संहिता सिद्धांत
विभागाध्यक्षः वैद्य जे. आर्. जोशी महोदयेन परिष्कृतः तथा संहिता
सिद्धांतविभागसहप्राध्यापकः वैद्य सौरभ कोकटनूर महोदयेन
सटीका व्याख्यातः।

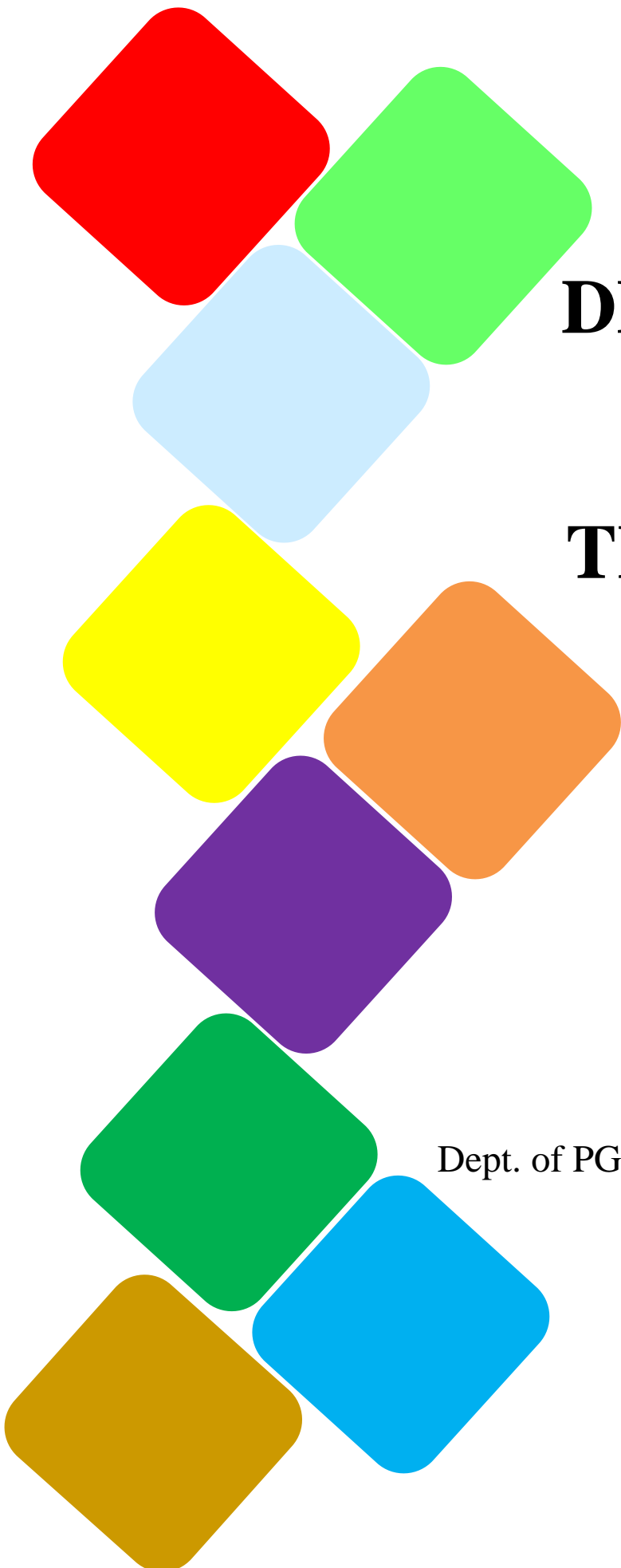


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***PROTOCOL DEVELOPED BY
DR.NAGARAJ PUJARI***



DESCRIPTIVE STUDY ON TRISKANDHA OF COVID-19

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DESCRIPTIVE STUDY ON TRISKANDHA OF COVID-19

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THE PRELUDE

Diseases were and are challenges to all species of living beings on earth, and epidemic infectious diseases especially have been a constant threat to human populations throughout history. The COVID -19 pandemic, caused by the Novel Corona Virus or SARS-CoV-2 is a global health crisis of our time and the greatest challenge that the world population is facing today. Increase in population density, varied food habits and life style, frequent and long distance travelling, are all factors that favour the spread of the contagion across the globe.

Ayurveda, the science of life which is intended towards “SWASTHASYA SWASTHYA RAKSHANAM, ATURASYA VIKARA PRASHAMANAM¹” –i.e; ‘ to maintain good health in the healthy and to treat the diseased’, understands disease in an individual through ‘pareeksha’ – which includes not only the examination of disease with respect to causative factors, symptoms and complications, but also includes examination of the diseased.

According to Acharya Charaka², any disease should be understood based on the samutthanavishesha, sthana vishesha, and the dosha involved and then should be treated accordingly. Any newly emerging disease can be understood and treated according to these basic principles of the science.

NIDANA VIVECHANA

‘Nidana’ – the causative factors of diseases, have been classified in various ways in texts.

Among them, the one which classifies nidana into Sadharana and Asadharana³ is relevant in this context. The current pandemic and its causative agent comes under the purview of Asadharanahetu as it causes similar symptomatology in a large group of population through vayu dushti.

Diseases in Ayurveda are also broadly classified into – Nija and Agantuja. Covid-19 may be considered as an Agantuja vikara.

While explaining Agantuja jwara, Charaka classifies it into four types. Among them, the one which is caused by Vishavruksha and Anilaspasha is Abhishangaja jwara⁴. Further, ‘bhutabhishanga’ has been identified as one among the causes of Vishamajvara along with other nija karana⁵. Here, the word ‘bhuta’ can be understood as that which is not visible or microscopic, and thus all microorganisms may be included under the purview of this term.

The term ‘Abhishanga’ is interpreted as abhisparsha, alingana or being in contact with. Thus, Abhishangaja vyadhi can be understood as a condition which is caused by contact with microorganisms. Since the present condition is mainly characterized by fever, it can be understood as ‘Abhishangaja Jwara⁶’.

In the context of Kushta in nidanasthana⁷, Acharya Sushruta explains the concept of Oupasargika roga which are characterized by sankramana i.e., spread from person to person. The modes of spread of such diseases have been enlisted as- Prasanga – direct contact as in sexual contact, Gatrasamsparsha – touch, Nishwasa – Inhalation of infected air or air with infected droplets, Sahabhujana – eating foods together, Saha asana shayana – sitting or sleeping together, Sahavastra mala anulepana – using same clothes and other materials. These concepts are very much relevant even today and modern texts of communicable disease epidemiology also describe similar modes of disease transmission. All these modes of transmission described may be broadly classified into two as explained in modern texts as- direct mode of spread and by respiratory route through droplets. The diseases which are mentioned as Oupasargika by Sushruta are Jwara, Kushta, Shosha and Netrabhishyanda. COVID-19 can be understood as a type of Jwara, fever being the predominant clinical manifestation.

Acharya Charaka discusses various aspects of epidemics and pandemics in a whole chapter in vimanasthana entitled ‘Janapadodhwamsa’⁸, where four factors are held responsible for such diseases, one among which is ‘Vayu’. Droplet spread through air is one of the important modes of transmission of all the contagious diseases, as in this disease.

Among the nidana of Sannipataja jwara, Acharya Charaka mentions vishamashana and anna parivartana⁹ –i.e; irregular or untimely food intake and

changes in food habits as a cause. This aspect also can be considered as the probable cause of mutation at the original epicentre of the COVID-19 outbreak.

LINGA VIVECHANA

The disease COVID-19 is coded as RA01.0 for a confirmed diagnosis and as RA01.1 for a suspected or probable case¹⁰ in ICD. The clinical spectrum of COVID-19 varies from asymptomatic or pauci symptomatic forms to clinical conditions characterized by respiratory failure to multi organ and systemic manifestations and MODS¹¹. Commonly, the condition has an onset with symptoms of URTI like fever, cough, myalgia or fatigue with other less common symptoms such as sputum production, headache, haemoptysis and diarrhea. As the disease course develops, dyspnea sets in and condition progresses into pneumonia. Complications include ARDS, Acute cardiac injury, secondary infections, multi organ failure¹².

Considering the above symptomatology, this disease can be understood under 'Jwara', while the specific diagnosis of Ekadoshaja or Samsargaja or Sannipataja jwara will vary among patients according to variable individual presentations.

All diseases pass through different stages as they progress in the Kriyakala¹³, and clear symptoms are exhibited at the stage of Vyaktaavastha. If the patient is not treated even in this stage, the disease progresses to Bhedaavastha where multiple dosha and dhatu are involved, ultimately leading to Upadrava.

Thus, the early stages of clinical features of COVID-19 which usually begins with myalgia, headache and symptoms of common cold may be considered as the stage of Purvarupa. The phase of fever with cough may be considered as the Vyakta stage and the stage with Pneumonia, ARDS, MODS, Sepsis and other complications in the condition may be understood as the stage of Bhedaavastha or Upadrava along with dhatu paka. Dhatu paka, vidradhi, paka are stages which indicate gambheera dhatugatwa.

The varied presentations observed in vyaktavastha of the disease as described above have similarities with the descriptions of Vataja, Pittaja and Kaphaja Ekadoshajajwara, Vata kapha samsargaja jwara and Vatoibana madhyapitta mandakapha Sannipata jwara.

On analyzing the dosha involved in the COVID-19 infection, Jwara presenting along with shareerabedha and shushkakasa may be considered as Vataja jwara, Teevrajwara with Annadvesha, chardi, atisara can be considered as Pittaja jwara, whereas Jwara associated with kasa, shwasa, chardi is considered as a Kapha pradhana Jwara. Vata kapha jwara presents with Shirograha, Pratishyaya, Kasa, Swedaappravartana, Madhyama jwara¹⁴ and Vatolbana madhyapitta mandakapha jwara presents with Swasa, Kasa, Pratishyaya, mukhashosha, parshwa ruja¹⁵.

Further, with respect to involvement doshas, considering the fast progress into further stages, it definitely has a prominent involvement of Vata. The involvement of Pranavaha srotas is evident from dushti lakshana of Pranavaha srotus in the disease, hence, involvement of Kapha, which is the sthanika dosha should also be considered. Finally, as ‘no jwara can occur without Pitta¹⁶’ and Jwara being the major clinical feature, there is obvious involvement of Pittadosha. Hence, there is definite involvement of all the three doshas and the condition may be considered Sannipataja. Some of the clinical documentation of COVID-19 cases resemble progression of Vataja Jwara to Sannipatajwara during disease progression.

FACTORS CONTRIBUTING TO SEVERITY OF THE DISEASE

The major factors that contribute to the variations in severity of a disease are Time (seasons), Dosha bala, Chetas or manobala and Artha i.e Purvajjanma kritha Shubha- ashubha karma¹⁷.

The impact of an epidemic disease depends on:

- Infectivity and virulence of the agent
- Susceptibility of the host
- Environmental favourability of the agent

The same can be understood in Ayurvedic terms under the following headings –

- Roga bala
- Rogibala / Dehabala/Vyadhikshamatwa
- Kala
- Manobala
- Vikaravighata bhava-abhava¹⁸

ROGA BALA – Considering the infectivity and virulence of the causative agent- the Novel Corona virus, the bala of the disease causing agent seems to be essentially high which is resulting in such huge number of cases and the high mortality rates.

ROGI BALA – It may be observed that in the current pandemic 80-85% of cases do not exhibit much symptoms or may exhibit only milder forms of symptoms¹⁹. Such mild presentation of disease is commonly observed in younger and middle age group who are supposed to have better dehabala and vyadhikshamatwa²⁰.

Based on rogibala, individuals are of two types-

- Vyadhi saha
- Vyadhi asaha

The individuals with good sara, samhanana, agni, dhatu samatwa, vyayami, and who follows charyas like dinacharya, rutucharya, ratricharya are usually considered as Vyadhi saha and the individuals with features opposite to these are considered as Vyadhi asaha.

Symptomatology and disease severity are influenced by the rogibala and so is reflected accordingly in Vyadhi saha and Vyadhi asaha. Disease tends to be of milder form in vyadhi saha, who may or may not have the clinical symptomatology and recovers from the illness easily, whereas the disease usually presents in a severe form in Vyadhi asaha (alpa rogibala) who are usually aged or suffer from co-morbidities like prameha, shonitabhishyanda, etc. In such patients, due to involvement of multiple srotas the disease enters Upadrava stage which can end up in bad prognosis and death²¹.

KALA – Here Kala refers to both age and season. As seen, the virus is causing havoc among the old aged. Old age is characterised by dhatu kshaya and thus bala kshaya, whereas the younger age is considered to be endowed with better bala due to better states of agni, dhatu, etc. Seasonal variations like high temperature and high relative humidity significantly reduces the spread of the Covid-19 virus²².

MANA-The clinical variations in onset, severity and recurrence also depends on satvabala. The weak state of mind i.e; anxiety or depression are also identified as the triggering factors of Jvara by Acharya Charaka^{23,24}.

ARTHA- Here, the term 'artha' refers to Karma, which is classified into Iaihika (Purushakara) i.e; present and Purvajanma (Daivakara) i.e; past deeds. It includes all types of Ahara, Achara, Prayaschitta etc. According to bala- abala, the shubha- ashubha karma which were practiced in past life also affect the samprapti and severity of illness of the current Nija or Agantuja vyadhi²⁵. The clinical diagnosis between Karmaja (Purvajanmakrita Ashubha karma) or Doshakarmaja is based on process of exclusion i.e in the absence of demonstrable modifying factors in current life, the disease may be considered Karmaja.^{26,27} This can be a possible explanation for the ongoing unexplained variations in clinical presentations, therapeutic responses and unexpected outcomes of the disease in different individuals.

VIKARA VIGHATA BHAVA ABHAVA²⁸ – Acharya Charaka explains all the above aspects like susceptibility, virulence and host factors under the concept of Vikaravighatabhavaabhava in Pramehanidana adhyaya. Here vikara means the disease, vighata means the factors that hinder/ obstruct/ stop the pathogenesis and bhava-abhava means absence of this conjunction or its presence. Host and its interaction with the pathogen and the resultant effect leads to disease or remission. If the nidana, dosha and dushya are all supportive to each other, then the condition becomes more severe, whereas when the three contradict each other, the disease may be sub clinical/ less severe/ with fewer symptoms or takes a longer time to show its clinical features.

When there is conglomeration of all of these three factors and when all the three are assisting each other in the pathogenesis, then the disease becomes more severe which may also be influenced by the factors like alparogibala, agni, dhatu samatwa, alpasara, alpasamhanana thus ending up in Sannipataja vyadhi and Upadravas. When a single dosha is highly vitiated leading to its predominant influence in the disease process and aided by other factors influencing it, the condition becomes that particular dosha pradhana sannipata.

The infection is mild and manageable if the impact of jwara in the body is limited to rasadhatu, which manifests as samanya jawara which is bahirvegi^{29,30}. But, if the host is weak or when proper care is not taken in the initial stages of the infection, the disease can progress further leading to dhatugatatva and vishamajwara^{31,32,33}.

Most of the COVID-19 cases present with continuous remittent fever as in santatajvara. Prognosis depends on doshapaka or dhatu paka which occurs

during 7 or 10 or 12 days depending upon the dosha predominance of Vata, Pitta or Kapha respectively^{34,35}.

SAMPRAPTI VIVECHANA

1. Dosha –Vata Kapha pradhana along with Pitta. Usually begins as ekadoshaja, then involvement of other doshas depending on dehabala, agnibala, chetobala and vikaravighatabhavaabhava vishesha.
2. Dhatu – Rasa at first, later all dhatus, even Ojas. Involvement of dushyas predict the outcome of the disease. If all 7 dhatu, upadhatu and mala are involved, then the prognosis becomes difficult.
3. Srotas – Rasa, Prana, Maha srotas at first, later others also. Major involvement at first will be in Rasa vaha srotas. As doshas undergo sarva Shareera sanchara, they get confined to Pranavaha srotas and produce majority of the symptoms there.
4. Sroto dushti – Sanga, Vimargagamana
5. Agni – Agni mandyata- at first Jatharagni, later dhatwagni
6. Ama – Jatharagnimandya janya, Later dhatwagnimandya janya aama
7. Udbhava sthana – Amashaya
8. Sanchara sthana – Sarva Shareera
9. Vyakta sthana – Kantha, Uras, Pranavaha srotas
10. Adhithana – Pranavaha srotas
11. Rogamarga – Abhyantara – in early stages, Trividha – in advanced stages.
12. Roga swabhava –Mrudu or Daruna depending on Rogibala.
13. Sadhyaasadyata – Sadhya in most, Kruchra in few, Asadya in very few.

UPADRAVA

Once the pathology begins, based on the host pathogen interaction or Vikaravighatabhavaabhava, the disease progresses in the host and when not controlled it usually ends up in Upadrava.

Jwara being a pitta pradhana vyadhi, when not treated properly or when neglected or due to alparogibala and due to pathogenic influence, the disease may progress into Pitta pradhana sannipata vyadhi and manifests complications like Marmabhighata³⁶ as described in Abhyantaravisarpa i.e, Sepsis, multiple organ failure, all of which present with high grade continuous fever.

In case of Kapha pradhana samprapti, its sannipatatwa might cause major involvement of Pranavaha srotas and its organs which might present with

complications such as ARDS, Fibrosis, Acute cardiac injury, etc. as described in Asadhya variety of Shwasa and Hikka roga^{37,38}.

AUSHADHA VIVECHANA

As quoted by Acharya Charaka, detailed understanding of the disease is very important before planning treatment as without proper understanding if treatment is started, it might end up in failure³⁹.

Treatment of COVID-19 may be understood under following headings

- I. Preventive care
- II. Clinical care
 1. Asymptomatic
 2. Mild to Moderate cases
 3. Severe to critical cases
 4. Rehabilitation
 5. Management of Residual dysfunctions

PREVENTIVE CARE-

Cases - Not tested positive, High risk, or Low risk under Quarantine-

Rasayana modalities are the basic line of treatment in the preventive management of Janapadoshwamsa³¹ or Pandemic disorders. Here both Achararasayana and Aushadha Rasayana have important roles^{40,41,42, 43,44}. Rasayana drugs improves the host defence system by its Urjaskara properties i.e; by enhancing dehabala.⁴⁵

Aushadha Rasayana

1	CHYAVANA PRASHA ⁴⁶	Key ingredients	Amalaki, Dashamoola, Draksha, Jeevanti, Guduchi, Pippali, Go ghruta, Tilataila
		Dosha / Rogagnata	Kasa, Shwasa, Kshata, Ksheena, Hrudroga, especially in Aged and Children
		Dose	25-50gms acc. to Agnibala
		Frequency	OD
		Specific Anupana	UshnaJala, Ksheera
2	PIPPALI RASAYANA ^{46,48}	Key ingredients	Pippali
		Dosha / Rogagnata	Kasa, Shwasa, Peenasa, Gala roga, Kshaya, Hikka, Vishama jwara,

		Dose	5-10 per day acc. to Deha bala
		Frequency	OD
		Specific Anupana	Madhu, Ghruta
3	LASHUNA KSHEERA/ RASAYANA ^{49,50}	Key ingredients	Lashuna
		Dosha / Rogaghnata	Vishamajwara, Hrudroga, Vidradhi, Shotha
		Dose	50ml
		Frequency	OD, in morning
		Specific Anupana	Ksheera, Ghrita

Both asymptomatic cases and unexposed cases also require Swasthasyaaurjaskara Chikitsa.⁵¹

Non pharmacological methods which may be followed -

1. Achararasayana:

Regular practice of personal, social ethics of general health to promote the physical, mental, emotional and Social health. It includes practice of general guidelines of daily and seasonal dietetics and balanced diet as per individual constitution and specific guidelines of Janapadodhwamsa^{40,41,42, 43,44}.

2. Sthana parityaga⁵² – As mentioned in classics, if the cases are found to be high in number in a particular place or region, to avoid further spread, it is better to leave that place and go to safer places which are supposedly free from infection. This method is known to stop the spread of infection.

3. Other non-pharmacological methods may include

- Maintaining safe social distancing
- Keeping oneself warm
- Avoiding contact with infected persons
- Avoiding travel
- Avoiding eating viruddha, sheeta, asatmya ahara
- Gargling with warm salt water, Triphala kashaya, Yashtimadhu kashaya added with Tankana
- Steam inhalation

CLINICAL CARE- TESTED POSITIVE

ASYMPTOMATIC-

SL	NAME	SPECIFICATIONS	
1	BILWADI GULIKA ⁵³	Key ingredients	Bilva, Tulasi, Haridra, Ajamutra
		Dosha / Rogagnata	Specifically TridoshajaJvara derived different visha including Bhuta visha
		Dose	500mg
		Frequency	TID
		Specific Anupana	UshnaJala
2	SAMSHAMANI VATI ⁵⁴	Key ingredients	Guduchi Ghana Satva, Lohabhasma, Pippalichurna, Ativisha
		Dosha / Rogagnata	Specifically indicated in fever
		Dose	250mg
		Frequency	TID
		Specific Anupana	Madhu, Ardrakaswarasa, UshnaJala
3	AROGYAVARDHINI RASA ⁵⁵	Key ingredients	Kajjali, Lohabhasma, Katukarohini, Nimba, Tamra bhasma
		Dosha / Rogagnata	Specifically TridoshajaJvara
		Dose	25-300mg
		Frequency	TID
		Specific Anupana	Sukhoshnajala

Similarly Ashvagandha, Guduchi, Amalaki, Nimba, Tulasi, Lashuna, Haridra, Katuki, Bhumyamalaki etc. are some of the pharmacologically established Rasayana drugs known to have immunomodulatory, bactericidal and antimicrobial activities⁵⁶ which are worth considering as single drugs in the preventive and curative management of Covid 19.

SYMPTOMATIC – MILD TO MODERATE

Treatment guidelines of Amajvara described in Charaka samhita are useful in this conditions according to severity of Ama, Santhapa, Trishna, Glani etc. Different modalities like Ushnodhaka, Lajamanda, Manda, Peya, Vilepi, Yavagu, Aushadhasiddha yusha, Mudgayusha, Mamsarasa, Shadanganpaniya,

Panchakola phanta, Karjuradi tarpana, Panchasara^{57,58} may be selected as per the associated features of Jwara.

On the basis of status of Deha, Agni and roga bala following aushadha kalpana may be selected. The treatment protocol may vary in individual patient depending on associated features of Jwara.

SL	NAME	SPECIFICATIONS	EXPLANATIONS
1	SHADANGA PANEEYA ⁵⁹	Key ingredients	Musta, Parpata, Usheera, Chandana, Udeechya, Nagara
		Dosha / Rogagnata	Jwarahara, Dahashamaka, Pipasahara, Aamahara
		Dose	25-50ml
		Frequency	Repeatedly all through the day
		Specific Anupana	-
2	TULASI PATRA SWARASA ⁶⁰	Key ingredients	Fresh leaves of Tulasi
		Dosha / Rogagnata	Kapha pradhana, Vishamajwara
		Dose	15ml
		Frequency	BD
		Specific Anupana	3-6gms of Marichachurna
3	ARDRAKA SWARASA ⁶¹	Key ingredients	Fresh tubers of Ardraka
		Dosha / Rogagnata	Vata kapha hara, Pratishyaya, Kasa, Jwara
		Dose	15ml
		Frequency	BD
		Specific Anupana	Honey
4	SANJEEVANI VATI ⁶²	Key ingredients	Vatsanabha, Bhallataka, Guduchi, Vacha, Vidanga, Gomutra
		Dosha / Rogagnata	Pitta pradhanasannipatajwara, Visha
		Dose	125mg
		Frequency	TID
		Specific Anupana	ArdrakaSwarasa or Ushnajala
5	DASHAMOOLA KWATHA ⁶³	Key ingredients	Dashamoola
		Dosha / Rogagnata	Vata kapha Jwara especially, Tridosahara
		Dose	15ml
		Frequency	TID
		Specific Anupana	Sukhoshnasheetajala
6	DASHAMOOLA	Key ingredients	Dashamoola

	ARISHTA ⁶⁴	Dosha / Rogagnata	Vata kapha Jwara especially, Tridoshahara, Balya
		Dose	15ml
		Frequency	TID
		Specific Anupana	Sukhoshnasheetajala
7	AMRUTASHTAKAM ⁶⁵	Key ingredients	Dashamoola
		Dosha /Rogagnata	Vata kapha Jwara especially, Tridoshahara
		Dose	15ml
		Frequency	TID
		Specific Anupana	Sukhoshnasheetajala
8	AMRUTARISHTA ⁶⁶	Key ingredients	Amruta, Dashamoola, Parpata, Katuki, Saptaparna, Musta
		Dosha / Rogagnata	Vata kapha jwara
		Dose	15ml
		Frequency	TID
		Specific Anupana	Sukhoshnasheetajala
9	MAHA SUDARSHANA CHURNA / GHANA VATI ^{67,68}	Key ingredients	Kiratatika, Haridra, guduchi, Katuki, Musta, Nimba, YAshti, Pushkaramula
		Dosha / Rogagnata	Sannipataja, dhatugata, Agantuja, Pitta kapha jwara
		Dose	1gm/125-250mgs
		Frequency	TID
		Specific Anupana	Shrutasheetajala
10	TRIBHUVANA KEERTI RASA ⁶⁹	Key ingredients	Hingula, Vatsanabha, Trikatu, Tankana, Tulsi, Shunti, Dattura
		Dosha / Rogagnata	Tridoshaja jwara
		Dose	125mg
		Frequency	TID
		Specific Anupana	Ardrakaswarasa, Ushnajala
11	MRUTYUNJAYA RASA ⁷⁰	Key ingredients	Kajjali, HIngula, Vatsanabha, Pippali, Maricha, Tankana
		Dosha / Rogagnata	VishamaJwara, Vata kapha jwara,
		Dose	250mg
		Frequency	TID
		Specific Anupana	Ardrakaswarasa, Madhu
12	VISHAMA	Key ingredients	Kalingakadi, Patoladi,

	JWARAHARA PANCHAKASHAYA ⁷¹		Nimbadi, Kiratatiktadi, Guduchyadi
		Dosha / Rogagnata	Vishamajwara and its variants
		Dose	15ml
		Frequency	TID
		Specific Anupana	Shrutasheetajala
13	SHWASA KUTHARA RASA ⁷²	Key ingredients	Kajjali, Vatsanabha, Gandhaka, Maricha
		Dosha / Rogagnata	Vata kaphajaKasa Shwasa
		Dose	62.5-125mg
		Frequency	BD
		Specific Anupana	Honey, Ardrakaswarasa, Sukhoshnajala
14	SHWASA KASA CHINTAMANI RASA ⁷³	Key ingredients	Kajjali, Mukta, Abhraka, Loha, Kantakari, Ajaksheera
		Dosha / Rogagnata	Vata pittajaKasa, Shwasa
		Dose	62.5-125mg
		Frequency	BD
		Specific Anupana	Tulasiswarasa, Pippalichurna&Sukhoshnajala
15	ANANDA BHAIRAVA RASA ⁷⁴	Key ingredients	Hingula, Gandhaka, Vatsanabha
		Dosha / Rogagnata	Sannipatajwara, Kasa, Shwasa, Atisara
		Dose	125mg
		Frequency	BD
		Specific Anupana	Honey, Ardrakaswarasa
16	TALISADI CHURNA ⁷⁵	Key ingredients	Talisapatra, Maricha, Shunti, Pippali, Vamshalochana, Twak, Ela, Sharkara
		Dosha / Rogagnata	Kasa, Shwasa, Jwara, Chardi, Atisara, Kapha vata jwara
		Dose	4gms
		Frequency	TID
		Specific Anupana	Madhu, Ghruta
17	SITOPALADI CHURNA ⁷⁶	Key ingredients	Sita, Vamshalochana, Pippali, Ela, Twak
		Dosha / Rogagnata	Kapha Pitta kasa shwasa hara

		Dose	4gms
		Frequency	TID
		Specific Anupana	Madhu, Ghruta
18	VASAKARISHTA ⁷⁷	Key ingredients	Vasa, Trikatu, Twak, Ela, Patra
		Dosha / Rogagnata	Shwasa, Kasa, Galaroga, Urakshata, Gala roga,
		Dose	15ml
		Frequency	TID
		Specific Anupana	Shrutasheetajala
19	KANAKASAVA ⁷⁸	Key ingredients	Dhattura, Vasa, Madhuka, Shunti, Bharangi, Talisapatra
		Dosha / Rogagnata	All types of Kasa, Shwasa, Yakshma, JeernaJwara, Kshataksheena
		Dose	15ml
		Frequency	TID
		Specific Anupana	Shrutasheetajala

Special attention should be given to protect the Deha, Agni and Chetobala which will be the key to check the further progress of the disease^{79,80}. The batteries of investigations like TLC, LFT, RFT, CRP, LDH, CXR which are helpful along with clinical signs to evaluate the therapeutic response and limitations of treatment should be aptly made use of.

SEVERE/ CRITICAL CASES

Supportive treatment along with Biomedicine if protocol permits.

SL	NAME	SPECIFICATIONS	EXPLANATIONS
1	JAYA MANGALA RASA ⁸¹	Key ingredients	Swarna, Rajata, Hingula, Dashamoola, Kirata
		Dosha / Rogagnata	Tridoshaja, Dhatugata, Antarvegijwara
		Dose	62.5-125mg
		Frequency	BD
		Specific Anupana	Jeeraka kashaya
2	MAKARADHWAJA ⁸²	Key ingredients	Swarna bhasma, Kajjali, Kasturi, Abhraka
		Dosha / Rogagnata	Puranajwara, Kasa, Shwasa

	Dose	62.5-125mg
	Frequency	OD
	Specific Anupana	Madhu

Based on the clinical variations, the following may be utilized if need –

- Mahalakshmvilasa Rasa
- Vasantamalati rasa
- Hemagarbhapottali Rasayana

REHABILITATION

Even after clinical recovery if persistently positive for Covid 19

SL	NAME	SPECIFICATIONS	EXPLANATIONS
1	TIKTA GHRUTA ⁸³	Key ingredients	Triphala, Haridra, Vasa, Parpata, Patola, Katuki, Nimba
		Dosha / Rogagnata	Vishamajwara
		Dose	125mg
		Frequency	BD
		Specific Anupana	Jeeraka kashaya
2	PUNARAVARTAKA JWARAHARA KASHAYA ⁸⁴	Key ingredients	Kiratatikta, Katuki, Musta, Parpata, Guduchi
		Dosha / Rogagnata	Punaravartakajwara
		Dose	15ml
		Frequency	TID
		Specific Anupana	Shrutasheetajala
4	SWARNA MALINI VASANTA RASA ⁸⁵	Key ingredients	Swarna bhasma, Hingula, Mukta, Pippali, Kharparasatwa
		Dosha / Rogagnata	Jeerna jwara, Vishamajwara, Kasa
		Dose	62.5-125mg
		Frequency	BD
		Specific Anupana	Madhu, Pippali churna

Clinical recovery with Negative for Covid 19 test-

SL	NAME	SPECIFICATIONS	EXPLANATIONS
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1	INDUKANTA GHRUTA ⁸⁶	Key ingredients	Karanja, Devadaru, Dashamoola
		Dosha / Rogagnata	Vatahara Jwarahara, Balya
		Dose	20-40gm
		Frequency	OD-early morning
		Specific Anupana	Ushnajala
2	BRAHMA RASAYANA ⁸⁷	Key ingredients	Amalaki, Haritaki, Panchapanchamula
		Dosha / Rogagnata	Deerghayu & Arogyadayaka
		Dose	25-50gms
		Frequency	OD-Early morning
		Specific Anupana	UshnaJala, Ksheera

NOTE: All the above mentioned herbal and herbo mineral preparations are the popular prescriptions based on clinical expertise of the author in the management of various stages of Jwara in general medical practice and are discussed in brief. But further validation is required for the use of same in epidemics like COVID-19.

RESIDUAL DYSFUNCTIONS

Rejuvenation therapy described in different diseases may be considered for treatment according to the nature of dysfunctions in different patients.

MANODOSHA AUSHADHA

Manodosha aushadha should also be employed in these cases owing to the impact caused by the disease condition on the mental status, through various modes of counselling, Jnana, Vignana, Dhairya, Smriti, Samadhi and other supportive care therapies^{88,89}.

DIET & REGIMEN

Food plays a major role during the diseased state as well as in the post convalescence stages. It is important to avoid doshas becoming leena in dhatus after the remission of disease, thus preventing punaravartana.

Usage of hot water is indicated in Jwara and many other disorders too as Ushnajala is Agni vardhaka, Vata anulomaka, Kapha shoshaka, and so can also be used as Anupana in most of the medicines described above⁹⁰.

Foods utilized should be laghu, easily digestible, ushna, should not cause obstruction in srotas, vata anulomana, agnivardhaka. Following may be the best choice based on the Prakruti and vikruti.

- Yavagu
- Yusha
- Peya
- Tarpaka
- Krushara

Diet should compose mostly of the following⁹¹

- Shashtikashali
- Mudga
- Yava
- Saindhavalavana
- Ghruta
- Madhu
- Shuddhajala

Dehavruttipalana like Dinacharya
 Rutucharya
 Ratricharya

To avoid relapse one has to follow a proper balanced diet based on the principles of Ahara vidhividhana, Ashtavidha ahara visheshaayatana, etc.

Sadvrutta palana – Being good and doing good is one of the best phrase to depict the regimen to be followed during these situations. Satya, Bhutadaya, Dana, Bali, Devatarchana are to be followed⁹².

CONCLUSION

COVID-19 being a pandemic may be understood and treated through Ayurveda along with an integrated approach whenever needed.

Roga bala, Rogibala, and Vikaravighatabhavaabhava play major roles in the host pathogen interaction thus deciding the severity of the disease in the infected.

Treatment may be planned according to individual clinical presentations and clinical stage of the disease with a mandatory use of rasayana therapy according to condition.

OTHER GUIDELINES:

1. Detailed history to be taken including all aspects related to the present scenario like travelling, contact with cases, etc.
2. Examination of all the cases with respect to Dashavidhapareeksha, Ashta sthana pareeksha, balavivechana, etc..
3. Treatment planning should be done based on the avastha, bala, co-morbidities and support and integrative approach should be considered whenever required.
4. Knowing the limitations and acting accordingly.
5. Use of proper PPE while handling cases

CAUTION: All the information presented in this article is in respect of current pandemic are descriptive and it requires validation and approval of apex body before application in practice.

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AYURVEDA PROTOCOL ON COVID-19



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CONTENTS

INTRODUCTION

1. Avastha (STAGE): 0

Patient with positive travel history/ contact with suspected or diagnosed cases/ home quarantine/ isolation with no or very mild symptoms.

2. Prathama Avastha (STAGE): 1

Shleshmika Sannipata Jwara (Alasya, Aruchi, Hrillasa, Daha, Vamana, Bhrama, Tandra and Kasa) Pathologic hallmark.

3. Dwitiya Avastha (STAGE): 2

Vata Shleshma Pradhana Sannipata Jwara with Swasa Upadrava (Sthaimitya, Parva bheda, Shirograha, Pratishyaya, Kasa and Swedabhada).

4. Tritiya Avastha (STAGE): 3

Dhathupakavastha-Pitta Prakopa-Vatakaphanubandhi Sannipata (Shaitya, Kasa, Aruchi, Tandra, Pipasa, Daha and Hrudivyatha)

Jwara Shamana, Dhatuposhaka, Dhatupaka nivarana, Kasa, Swasahara, and Rogibalasthirakara.

5. Chaturtha Avastha (STAGE): 4

Samasannipatavastha (Hikka, Kasa, Shaitya, Vamana, Antardaha, Mahashwasa, Marma Chheda)

Majjadhatugata and Swasavarodha Needs Emergency Management

6. Stage of Resolution: Rasayanachikitsa

Preventive Measures: Achara Rasayana, Sadvruttapalana, Daivavyapashrayachikitsa

Dhupanachikitsa and Mantrachikitsa

- **Aharakalpa**
- **Dos and Don'ts Dos: Pathya and Apathya**

INTRODUCTION

The outbreak of Corona Virus disease (COVID-19) has been declared a pandemic and the virus has now spread too many countries and territories. While a lot is still unknown about the virus that causes COVID-19, we do know that it is transmitted through direct contact with respiratory droplets of an infected person. Individuals can also be infected from touching surfaces contaminated with the viruses and touching their face (eg: Eyes, Nose, and Mouth). While COVID-19 continues to spread it is important that communities take action to prevent further transmission, reduce the impacts of the outbreak and support control measures.

Today it is every citizen's responsibility to fight against this crisis and help each other. Cultivate compassion and increase resilience while building a safer and more caring community.

Ayurveda is considered as life science it has explained many concepts along with the Chikitsa Siddhanta. Concepts like Sankramikaroga, Janapadodhwamsa, Krimi, Visha are the familiarly explained in all the Arshya Granthas. In treatment even though without naming disease also we can adopt the chikitsa based on the Dosha Dushya Lakshana. Aim of Ayurveda is to give importance to both healthy and diseased one for the betterment of leading life. We all know that prevention is better than cure, while there is no medicine for Covid-19 as of now, it will be good time to take preventive measures which can be helpful in combating this deadly pandemic.

From the team of esteemed institution Shri D.G.M. Ayurvedic Medical College and Research Centre and Hospital, Gadag a sincere effort is being made to make some guidelines collecting from all the Ayurvedic treatises (Arshya Granthas). These collection highlights prevention, precaution, use of Rasayanas etc in this protocol.

The Institution Principal and Faculty members were thankful to the Respected Commissioner and all team, Department of AYUSH, Bangalore for providing this opportunity.

MANAGEMENT PROTOCOL COVID -19 IN AYURVEDA

1. Avastha (STAGE): 0

Patient with positive travel history/ contact with suspected or diagnosed cases/ home quarantine/ isolation with no or very mild symptoms.

Consider the patient having Amavastha of Jwara with Vata and Pitta predominance

- Panchakola Phanta – Amapachanartha yatha yogya
- **Shadangapaneeya:** Subject should start taking Shadangapaneeya frequently in warm condition. 50 ml every hourly **Cha. Chi.1/145, A.H.Chi.1, Bai.Rat.**
- Decoction prepared out of Ardraka, Tulasi, Maricha, Amruta, Guda (Jaggry) can be taken three to four times in a day.
- Tab-Sudharshana Ghanavati 1tid as a prophylactic.
- Gandoosha with Yastimadhu and Triphala siddha Kashaya

2. PrathamaAvastha (STAGE): 1

Shleshmika Sannipata Jwara (Alasya, Aruchi, Hrillasa, Daha, Vamana, Bhrama, Tandra and Kasa)

Pathologic hallmark

Principals: Amapachana, Jwara shamana, Kaphashodha and Vatanulomana

Kashaya:

- Shadanga paneeya - 50 ml every hourly **Cha. Chi.1/145, A.H.Chi.1, Bai.Rat.**
Jwaraprakarana(Jwara, Daha, Trishna, Atisara,)
- Amruthothara kashaya -before food 15 ml bid with warm water **Sahasrayoga Kashyaprakarana (Tridosahara, Pratishyaya, Sarvajwarahara, Ama and Ajeerna Rasadhatu dhustihara).**
- Bharangyadi kashaya – 15ml twice daily with warm water **Sahasrayoga Kashayaprakarana (Pachana, Kasa, Swasa, Sannipatajajwara, Tridosahara, Hritshoola, and Agnimandhya)**

- Bhoonimbadi kashaya - 15ml twice daily with warm water **Bai.Rat, Jwaraprakarana (Swasa, Kasa and Raktapitta, Deepana)**

Gutika:

- Tab Sanjeevani vati- 1-2 tab before meals, with warm water **Sha.Sam.M.Kha.7 (Deepana, Ama pachana, Krimihara, Kaphahara and Sannipatajwara)**
- Tribhuvana keerti rasa -125mg twice in a day, with Ardraka swarasa as Anupana **Rasamrita Rasayoga, Y.R, Jwara (all types of Jwara)**
- Tab Jayamangala rasa 125mg twice daily with Madhu as Anupana **Bai.Rat. Jwara (Santata Sarvajwara)**
- Jwarghnagnigutika: 125mg twice daily with Madhu with Guduchiswarasa all types of Jwara **Yogartnakara Jwara.**

Churna:

Taleesadi churna: Dose: 3-5gram bd with Madu

Phala: Kasa, Swasa, Jwarahara, Atisara and Chardi. **Yogaratnakara Jwara**

Sitopaladichurna: Dose: 3-5gram bd with Madu or Ghrita

Phala: Swasa, Kasa, Hastapada daha, Mandagni and Jwara. **Yogaratnakara Jwara**

Triphala Pippali: Dose: 3-5gram bd with Madu or Ghrita

Phala: Agnivardhaka, Saraka Swasa, Kasa and Jwarahara **Yogaratnakara Jwara**

Khatphaladichurna: Dose: 3-5gram bd with Madu

Phala: Jwara, Kantya, Kasa, Swasa, Kshaya and Aruchi **Yogaratnakara Jwara**

Drakshadichurna: Dose: 3-5gram bd with Madu

Phala: Jeernajwara, Aruchi, Swasa, Kasa and Shotha **Yogaratnakara Jwara**

Shringyadichurna: Hikka, Swasa, Urdvavata, Kasa, Aruchi and Peenasa

Dose: 3-5gram bd with Ushnodaka

Shuntyadichurna : Mandagni, Kantaroga, Swasa and Hridroga **Yogaratnakara Swasa**

Dose: 3-5gram bd with Ushnodaka

Samasharkarachurna: Mandagni, Aruchi, Swasa, Kanta and Hrudayaroga

Yogaratnakara Kasa

Shuskakasa: Ropyabhasma + Pravalapishti along with Vasavalehya **Ayurvedasarasangraha**

Gandoosha

- Sukhoshna lavana Jala with Hingu and Yashtimadhu

3. Dwitiya Avastha (STAGE): 2

Vata Shleshma pradhana Sannipata Jwara with Swasa Upadrava (Sthaimitya, Parvabheda, Shirograha, Pratishyaya, Kasa and Swedabhada)

Kashaya -

- Nayopayam kashaya - before food 15 ml bid with warm water
SahasrayogaKashayaprakarana (Kasa, Swasa, Hikka, Deepana, Pachana)
- Panchatiktaka kashaya - before food 15 ml bid with warm water **Chakradatta/ Jwara**
(Sarvajwara and Balya)

Asava/Arista-

- Amritarishta – 10ml twice daily with warm water after food **Bai. Rat. Jwara**
(Jwara, Agnimandhya, Kasa, Pratishyaya)
- Kanakasava – 10ml twice daily with warm water after food **Bai. Rat. Swasa**
(Jeernajwara, Swasa, Kasa and Kaphachedaka)
- Vasakarista – 10ml twice daily with warm water after food **Gadanigraha**
Asavadhikara (Tridosahara, Deepanapachana, Kasa, Swasa, Shotha Raktapitta,
Balya, Hrudhya and Raktadushtihara)

Gutika –

- Lakshmivilasarasa – 200 mg bid Kasa, Peenasa, Yaksma, Prameha, Galashosha
Bai.Rat.Rasayana
- Tribhuvanakeertirasa – 125 mg thrice daily with Ardraka swarasa as Anupana
Sannipatajwara, Vatakaphajwara **Rasamrita 9/80**
- Chintamanirasa – 125 mg bid Kasa, Pratishyaya and Balya
- Brihat Kasturibhairava rasa – 125mg bid with Dashamularishta **Bai.Rat. Jwara**
(Vatakaphashamaka and Sarvajwarahara)
- **Siddha Aswakanchuki rasa*** ½ ratti pramana with Ardraka swarasa **Rasatantrasara**
va Siddha Pryoga Samgraha (Kasa, Swasa, Jwara and Pranavahasrotovikara)
- Mrutyunjayarasa – 125-200 mg thrice daily Sarvajwara, **Yogaratanakara Jwara**

Churna-

- Sudarshana churna – 3grams twice daily with warm water Jeernajwara and
Vishamajwara **Sha. Sam. M.K.6/134**

- Taleesadichurna: **Dose: 3-5gram bd with Madu Phala:** Kasa, Swasa, Jwarahara, Atisara and Chardi. **Yogaratanakara Jwara**

Gandoosha – Continue same

* This particular yoga is Anubhuti yoga explained by author in the context of Jwaraprakarna and it was used by siddhayogi in the year 1921 when there is crisis of **Plague pandemic**. This yoga has 20 ingredients; shuddha parada, Tankana bhasma, Shuddha gandhaka, Vatsanabha, Shunthi, Maricha, Pippali, Hareetaki, Vibhitaki, Amalaki, Chitraka moola, Hingu, Shuddha Hingula, Revalachinni, Musta, Shuddha haratala, Vacha, Shuddha Somala, Shuddha Jayapala, Gokshura 10gms of fine powder of each and Bhringaraja Swaras(qs).

4. Tertiya Avastha (STAGE): 3

Dhathupakavastha-Pitta prakopa-Vatakaphanubandhi Sannipata (Shaitya, Kasa, Aruchi, Tandra, Pipasa, Daha and Hrudivyatha)

Jwara shamana, Dhatuposhaka, Dhatupaka nivarana, Kasa, Swasahara and Rogibalasthirakara

Kashaya-

- Bharangyadi Kwatha Dwitiya – before food 15 ml bid with warm water
Yogaratanakara Vishamajwara (Upadravayukta Jwara, Mrityuhara, Krimi, Hritvikra, Chittabhrama and Swasashoola)
- Darvyadi kashaya – before food 15 ml bid with warm water **Yogaratanakara Vishamajwara (Vishamajwara, Ekahika, Dwahika, Tritiyakajwara, Chaturtaka Jwara and Bhutajwara,)**
- Patolamooladi kashaya – before food 15 ml bid with warm water
- Parpataka kashaya – before food 15 ml bid with warm water

Rasa-

- Brihat kastoorbhairavarasa – 125mg bid with Dashamularishta **Bai.Rat. Jwara** (Vatakaphashamaka and Sarvajwarahara)
- Swarnamalini vasanta rasa – 125mg bid with Madhu / Pippalichurna **Yogartatnakara Jwara Sarvajwara**
- Mruthyunjaya rasa – 125-250mg bid **Bai.Rat. Jwara Sarvajwara**

- Swasa kasa chinthamani rasa – 125mg bid with Madhu as Anupana **Bai.Rat.**
Hikkswasadikara (Kasa, Swasa and Pratishtyaya)

Asava/Arishta

- Dashamoolarista-10ml bid with ushnodaka after food **Sha.Sam.M.K**
(Pranavasrotovikara Kasa, Balya)
- Vasakasava - 12ml-24ml bid with Ushnodaka after food Gadanigraha
Asavadikara/152 Kasa, Swasa and Kashaya.

5. Chaturtha Avastha (STAGE): 4

Samasannipatavastha (Hikka, Kasa, Shaitya, Vamana, Antardaha, Mahashwasa and Marma chheda)

Majjadhatugata, Swasavarodha, Needs Emergency Management

1. Poornachandra makaradwaja rasa 125mg
 - i. +
Brihat kasturibhairava rasa125mg
 - ii. +
Jayamangala rasa 125 mg all to be administered frequently with honey
2. Gudaadichurna- **Teevraswasa Yogaratnakara Swasa**
3. Potash alum red verity bhasma 2-4ratti with Madhu or Ghrita, Raktashodhaka, reduces Swasavega, Kasahara, Parshvashoolahara, Urashoolahara and acts as Amritasamana - **Ayurvedasarasangraha**
4. Godhantibhasma 1ratti + Haratalabhasma 1ratti Shrungabhasma 1ratti with Betel leaf gives Swasavega, Kasahara, Parshvashoolahara, Urashoolahara and acts as Amritasamana - **Ayurvedasarasangraha**
5. Anandabairavarasa+ Sitopaladichurna+ Yastimadhuchurna+ and Abhrakabhasama Swasavega, Kasahara, Parshvashoolahara, Urashoolahara and acts as Amritasamana **Ayurvedasarasangraha**

STAGE OF RESOLUTION

Administration of Rasayanas:

1. Chyavanaprasha Rasayana:

Phala : Visheshata Kasa, Swasa, Ksheena, Kshata Swarakshyaya, angavrudhi in Bala Uroroga, Hrudroga, Vatarakta, Trishna, Shukrasambandhi Vatadi Doshavikarahara. Medha Smriti, Kantiarogya, Ayu, Indriyabala, Maithunashakti, Jatharagnivrudhi, Varnakantivrudhi Vatanulomanam and Navayavanaprapti. **Cha. Chi.1/1/70-74, A.H.U.39/33-41, A.S.U.49/25, Ha.Sam.**

Dose: 6 – 12 grams with water

2. Agastya Haritaki Rasayana (Agastya Haritaki):

Phala: Hikka, Kasa, Swasa, Kshaya, Hrudroga, Vishamajwara, Sangrahani, Aruchi, Peenasa Valipalita, Varna ayu balakaram and acts as Rasayana.

A.H.Chi. 3/125-128, Bai. Rat. 15/ 173-178, A.F.I, Yogaratnakara p.n.414

Dose: 6 – 12 grams Warm water or Ksheera.

3. Vyagri Rasayana:

Phala: Peenasa, Swasa Sawarakshaya, Kshayaja, Kshataja, Vatika, Paittika, Kaphajanya, Dwidoshaja, Sannipataja, and Ekadasharupa upadravayukta Rajayakshma. This will acts as Rasayana. **Bai. Rat. 15/ 161-172, Yogaratnakara p.n.413**

Dose: 6 – 12 grams with Shritasheetajala or Mandhoshna dugdha

4. Kushmanda Khanda (Kushmanda Rasayana):

Matra:6 – 12 grams with Jala, Ksheera

Phala: Kasa, Swasa, Jwara, Urakshata, Kshaya, Swarabedha Puranajwara, Raktapitta, Chardi, Trishna, Shukra kshaya, Dourbalya Karshya, and Vaivarnya. It will acts as Rasayana. **Bai. Rat. 13/ 95-100, A.F.I**

5. Shivagutika :

Phala: Kshaya, Shosha, Peenasa, Hikka, Kasa, Swasa, Damstravisha and Garavisha, Mantroushadha Prayoga, Mukharoga, Netraroga, Shiroroga, Anaha, Atisaraprameha, Yakritroga. **A.S.U.49/156, C.D.Rasayanadhikara/190, Bai.Rat. Rasayanaprakarana/151-175, Y. R. Rajayakshma**

Matra: 6 grams **Anupana:** Ksheera, Mamsarasa, Dadimarasa, Sura, Asava, Madhu and Sheetalajala.

6. Pippali Rasayana:

Phala: Kasa, Kshaya, Shosha, Swasa, Hikka, Galaroga, Vishamajwara, Vaiswarya, Peenasa, Arshas, Grahani dosha, Panduroga, Shopha, Gulma and Vatabalaskajwara.

Cha. Chi.1/3/32-35, A.H.U. 39/96-97, A.S.U. 49/52-56, Ma. Chi. Rasayanatantra/11-12

Dose: 10, 6, 3 Uttama, Madhyama and Avaramatra

7. Pippalipaka: Yogaratnakara Vishamajwara adhikara

8. Lashuna Rasayana:

Lashuna Matra: Avara matra-4 Pala, Madhyama matra- 6 Phala, Uttama matra-8 or 10 Pala, or 50 in number 60 in number and 100 in number Respectively.

Phala: Kasa, Swasa, Krimi, Jeernajwara, Agni and Bala vardhanartha Lashuna Rasayana is best. Asthichuti, Astibhagna, Astivvyadhi, All Vatarogas, Arthavasambandhi roga, Veeryasambandhi roga, Bhrama, Kusta, Gulma, Kilasa, Kandu, Visphota, Vaivarnyata, Timira, Naktandya, Ashmari, Mutrakrichra, Baghandhara, Pleeharoga, Shosha,Vatarakta it also enhances Medha. **A.H.U.39/129,A.S.U.49,82-111, Ka.Sam. Lashunakalpana.**

9. Dashamoola Hareetaki Rasayana:

Dose: 12 grams with Jala,

Phala: Jwara, Shosha, Karshya with Milk **A.H.Chi.17/14**

10. Kantakari Avaleha:

Dose: 12 grams with Jala,

Phala: Kasa, Swasa, Hikka **Sha.Sam.M.Kha.8/5**

11. Mahashatphalaghrita:

Dose: 12 ml

Phala: Jwara, Swasa **Yogartnakara Vishamajwara**

12. Sevantipaka: Jeernajwara, Kshaya, Kasa all types of Mukharoga **Yogartnakara**

Jwara. Dose 12gms

PREVENTIVE MEASURES:

- Anutaila as Pratimarsha Nasya. **Cha. Su. 5/ 63-70.**
- **Dhumapana:** Vartis Prepared of Chandana, Patra, Twak, Ela, Ushira, Padmaka, Madhuka, Mamsi, Guggulu, Agar, Sharkara, Udumbara, Ashwatta, Plaksha, Lodra, Musta and Shallaki. These drugs can be used for external and internal purposes. **Cha. Su. 5/ 20-26.**
- **Ushna jala pana:** Drinking warm water frequently does the Amapachana.
- **Sadrivutta palana:** Following Rutucharya, Dinacharya, and Ratricharya
- **Asthangayoga-** Like Shoucha
- **Pranayama, Dhyana and Kapalabhati**

Achara Rasayana/ Nitya Rasayana:

Ahimsaka, Adhyatma gnana praveena, Dani, Nitya tapaswi. Yukthi gnana of desha, kala pramana gnana, Japa, Shoucha, Brahmacharya palana, Pranidaya and Paropakara.

Cha.Chi. 1/4/30-35, R.R.S

Hands wash Sanitizer:

- Nimba Kwatha, Panchavalkala Kwatha, Triphala Kwatha, can be used even though if we used repeatedly used or dipping also it gives good result.
- Vidanga, Hardra, Guggulu, Yastimadhu, Triphala, Ghritakumari sidhha kwatha.

If we consider the corona Virus as Visha, in this condition **Acharya Vagbhata commentary of Sarvangasundari** has explained that, after 21 days intensity of the Visha will reduce by itself so for that reason patient has to stay in home for 21 days to avoid spreading from one person to another person. **A.H.Utt.37/66**

- Krimignagana dravya siddha kashya.

DAIVAVYAPASHRAYACHIKITSA:

- Vachadhupa
- Shirishadhupa
- Ashthangadhupa : Yo.Rat
- Aparajitadhupa: A.H.Chi.1/163
- Bhutajwardhupa- Kalyanakaraka
- **Maheshvaradhupa:** Skandonmada, Pisacha, Rakshasa, Devonmada, and Vishamajwara Yogaratnakara Jwarachikitsa

Dhupana: Dhupa prepared out of Vacha, Kushta, Haritaki, Sarshapa, Guggulu, Nimba, Ghrita, Madhu which purifies surrounding environment and destroys the toxic organisms.

A.H.Chi.1/162

Dhupanachikitsa/ Homa Havana using Ghrita, Guggulu, Chandana, Vidanga, etc, purifies environment by destroying the cause, by all these self purification.

Tatra Daivavyapashara- mantra aushadha mani mangala bali upahara Havana/ homa Japa, Devadarshana, Pujana prayachitta upavasa swasthayana adi **A.H.Chi.1/165**

Adravyabhuta chikitsa: Santvana, Aswsana and Sthanaparityaga

Bhutabhishyangajawara- Jnana, Vijnana, Dhairya and Samadhi and Ekagrachittata pacifies Bhutabhishyangaja Jwara. **Bhai.Rat. 5/336 p.n 105**

Sahadevamula kanta bandhana within 1-4 days pacifies Bhutajwara. **Bhai.Rat. 5/339 p.n 106**

MANTRA CHIKITSA:

Vishnusahasranama- Sarva Jwarahanti. **Bhai.Rat. 5/416 p.n 114**

vishwam vishNur vashatkAro, bhUtha bhavya bhavatprabhuH | bhUtha kRdh bhUdha bRdh
bhAvo, bhUtAtmA bhUta bhAvanaH ||

.....
Mahamrityunjayamantra

ॐ त्र्यम्बकं यजामहेसुगन्धिं पुष्टिवर्धनम् ।

उर्वारुकमिव बन्धनान्मृत्योर्मुक्षीय मामृतात् ॥

Om Try-Ambakam YajamaheSugandhim Pushti-Vardhanam
Urvaarukam-Iva BandhanaanMrtyor-Mukssiiya Maa-[A]mrtaat ||

AHARAKALPS:

- Yavagu prepared or Vidanga, Pippali, Shigru, Maricha with Takra and Sauvarchala – is Krimighna. **Cha. Su. 2/23.**
- Yavagu prepared of Dashamoola cures Kasa, Hikka, Swasa and diseases due to kapha. **Cha. Su. 2/27.**
- Panchakolasiddha Yavagu – Deepana - pachana
- Milk of Sheep and Goat: Kasa, Jwara, Hikka and Swasa. **Cha.Su.27/ 222**
- Yavagu prepared of laja saktu (powder of fried paddy) in Jwara. **Cha. Chi.1/155**
- Yavagu prepared of vidaryadi gana dravya when Jwara associated with Kasa, Swasa and Hikka. **Cha. Chi.1/184**
- **Ahara:** Puranashali, Sahstikashali, Patola, Mudga, Karkotaka, siddha Yusha. Saveera, Tushodaka, Shukti, Raga, Kambalika, Veshavara and Puranasarpi.

Ekamulika

- Guduchi
- Tulasi
- Haridra
- Shunti
- Maricha
- Lavanga
- Ela
- Yastimadhu
- Pushkaramula
- Vasa
- Madhu
- Nimba

Antiviral Herbal drugs:

- Bhumyamalaki
- Yastimadhu
- Tulasi
- Lashuna
- Shunti
- Parijatha
- Erandakarkati
- Asthishrunkala
- Chirabilva
- Shigru
- Chirat
- Ardraka
- Pashanabedha
- Dadima
- Nimbi
- Haridra
- Kutaja
- Kramarda
- Karaveera

Immune boosting Fruits:

- Amalaki
- Draksha
- Dadima
- Kharjura
- Phalgu
- Amra

DOS AND DON'T DOS

PATHYA	APATHYA
Ahara: Puranashali, Sahstikashali Yusha, Saveera, Tushodaka, Shukti Raga, Kambalika, Veshavara and Puranasarpi. Vihara: Snana, Nritya, Pranayama Phalas: Draksha, Kapittha, Dadima, Amalaki, Kharjura,	Ahara: Prakritiviruddha annapana Asatmyabhojana, Viruddha anna Pashupakshimamsarasa Madhya, Janghala, Dushtambu, Dushtaanna, Matsyasevana, Vihara: Atapa, Dushtavayusevana, Rajosevana Bhramana, Vyavaya,

<p>Aushadha: Ardraka, Shunti, Rasona, Krishnatulasi, Trikatu, Pushkaramula, Ela, Lavanardraka, Ghritabharjita hingu, Gomutrapana Haritaki, Tilataila, Sarshapataila, Madhu Mutra of Ushtra, Chagamutalepa.</p> <p>Havana, Dana, Brahmana Devata Puja Pathya. Geeta, Avagaha, Dhumapana, Uttamagrihavasa, Ahimsaka, Adhyatma gnana praveena, Dani, Nitya tapaswi. Yukthi gnana of Desha, Kala Pramana gnana. Japa and Shoucha.</p>	<p>Ratrijagarana</p>
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LIST OF REFERANCES

1. CHARAKA SAMHITA
2. SUSHRUTA SAMHITA
3. ASHTANGA HRIDAYA
4. SHARANGADHARSAMHITA
5. MADAVANIDANA
6. BHAVAPRAKASHA
7. BHAISHAJYA RATNAVALI
8. YOGARATNAKARA
9. VANGASEN
10. GADANIGRAHA
11. AYURVEDA FORMULARY OF INDIA
12. SAHSHRAYOGAM
13. INDIAN MEDICINAL PLANTS
14. AYURVEDA SARASANGRAHA
15. RASAMRITA
16. RASATANTRASARA VA SIDDHAPRAYOGA SANGRAHA
17. CHAKRADATTA
18. KASHYAPASAMHITA

COVID -19 IN AYURVEDA

INTRODUCTION:

Definition:

Corona virus disease 2019 (COVID-19) is a potentially severe acute respiratory infection caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). The virus was identified as the cause of an outbreak of pneumonia of unknown cause in Wuhan City, China, in December 2019. The International Committee on Taxonomy of Viruses has confirmed SARS-CoV-2 as the name of the virus. The World Health Organisation has confirmed COVID-19 as the name of the disease that SARS-Co-V-2 infection causes.

Epidemiology:

The World Health organization was informed of 44 cases of pneumonia of unknown microbial aetiology associated with Wuhan City, Hubei Province, China on 31 December 2019 and announced that a novel corona virus had been detected in samples taken from these patients. The virus has genetic similarity to the SARS-CoV virus but there are differences in the disease spectrum and transmission.

Severe acute respiratory syndrome corona virus 2 is a previously unknown beta corona virus that was discovered in bronchoalveolar lavage samples. Corona viruses are a large family of enveloped RNA viruses. A majority of patients in the initial outbreak reported a link to the Huanan South China Seafood Market, a live animal market suggesting a zoonotic origin of the virus.

Pathology:

According to WHO the estimated incubation period ranges from 1 to 14 days. The median incubation period has been estimated as 5 days .Transmission is possible during the incubation period. The exact pathophysiology is not clearly known, a structural analysis suggests that the virus may be able to bind to the angiotensin-converting enzyme-2 receptor in humans.

Signs and Symptoms:

The clinical presentation resembles viral pneumonia

Most common symptoms:

- Fever

- Cough
- Dyspnoea
- Myalgia
- Fatigue

Less common symptoms:

- | | |
|---------------------|-------------------|
| • Anorexia | • Rhinorrhoea |
| • Sputum production | • Chest pain |
| • Sore throat | • Haemoptysis |
| • Confusion | • Diarrhoea |
| • Dizziness | • Nausea/vomiting |
| • Headache | • Abdominal pain |

Diagnosis:

Main diagnostic factors are Fever, Cough, Dyspnoea, Fatigue, Myalgia, Anorexia and sore throat and with investigation tests.

Human race around the world have been trembled with the virus COVID 19. Corona virus disease 2019 is a severe acute respiratory infection caused by SARS-CoV-2. WHO has declared a public health emergency of international concern and rated the global risk assessment as high. The symptom ranges from mild common cold presentation to a severe viral pneumonia leading to acute respiratory distress syndrome. Spreading of the infection is the most dangerous fear of the current situation.

Ayurveda here has a scope to discover its impeccable traditional drug sources. As always two main mottos of Ayurveda is prevention and cure. Prevention here plays a major part as the spreading rates are getting very high day by day.

Definition of Pandemic:

An epidemic is defined as “an outbreak of disease that spreads quickly and affects many individuals at the same time.” A pandemic is a type of epidemic (one with greater range and coverage), an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population. While a pandemic may be characterized as a type of epidemic, you would not say that an epidemic is a type of pandemic.

Similarly in Ayurveda these types of diseases can be considered as communicable diseases in Ayurveda which can be categorised under Adhidaivika, daivabala pravritta, agantuja vaydi etc.

Concept of Infectious Disease in Ayurveda:

Acharya Charaka stated that there are two factor responsible for disease one is internal factor mean doshavikriti and second is external factor mean Agantuja (contaminated water, food, microbes, and trauma). Acharya Sushruta has described that the diseases like

kustha (Leprosy), Jwara (pyrexia), Shosha (kock's or tuberculosis) are contagious and spreads or occurring direct contact or by use of contaminated objects. all forms of Prasnaga (contacts), Gatra Samsparsha (direct contacts), eating together, sleeping together (including sexual contact), sharing and using of others cloths, ornaments, ointments etc. leads to diseases like Kustha, Jwara, Shosha, Netrabhishyanda (conjunctivitis), and in this manner the disease spread from person to person, which is called as an Aupasargica disease.

Acharya Charaka has described role of Vayu (air), Udak (Water), Desha (soil and area), and Kala (Time) responsible for Janapadodhwamsha (epidemics), most of the infectious disease and contamination of physical, chemical and biological factors in occurrence of disease. Dalhana in his commentary on Sushruta stated that upsargaja means micro -organism affect the human being and cause many infectious diseases. Acharya Sushruta also described the causative animal, clinical feature of Jalasantrasa which is very much similar to hydrophobia which approved today that it is a viral disease.

Table Showing Correlation of Corona Virus with different diseases

Corona virus	Bhutabhishan gaja Jwara	Sannipataja Jwara	Raja Yakshma	Swasanaka Jwara	Kantharohini Jwara	Concept
<p>Most common symptoms:</p> <p>Fever</p> <p>Cough</p> <p>Dyspnoea</p> <p>Myalgia</p> <p>Fatigue</p> <p>Less common symptoms:</p> <p>Anorexia</p> <p>Sputum production</p> <p>Sore throat</p> <p>Confusion</p> <p>Dizziness</p> <p>Headache</p> <p>Rhinorrhoea</p> <p>Chest pain</p> <p>Haemoptysis</p> <p>Diarrhoea</p> <p>Nausea/vomiting</p> <p>Abdominal pain</p>	<p>Pratishyaya</p> <p>Shirasoola,</p> <p>Sheetakampa</p> <p>Angamarda,</p> <p>Kasa, Jwara</p> <p>avasada..</p> <p>visheshatu</p> <p>Puppusakrama</p> <p>nA</p> <p>Si.Ni.</p> <p>Jwaranidana</p>	<p>Kasa</p> <p>Swasa</p> <p>Kantashoola</p> <p>Aruchi</p> <p>Kapha</p> <p>steevana</p> <p>Hrudvyata</p> <p>Tandra</p> <p>Cha.Chi.3,</p> <p>Madhava</p> <p>Nidana</p> <p>2/18-23,</p>	<p>Swara-</p> <p>Bedha</p> <p>Atisara</p> <p>Stheevana</p> <p>Jwara</p> <p>Daha</p> <p>Gourava</p> <p>Aruchi</p> <p>Kasa</p> <p>Kantapeeda</p> <p>Su.Utt.41,</p> <p>Madhava</p> <p>Nidana10/</p> <p>6-7</p>	<p>Teevra</p> <p>Jwara,</p> <p>Prashvshool,</p> <p>Kasa,</p> <p>Swasavruddh</p> <p>i dourbalya</p> <p>Kantakujana</p> <p>Madhava</p> <p>nidana</p> <p>Parishishta</p> <p>Siddhanta</p> <p>Nidana.</p> <p>Jwaranidana</p>	<p>Jwara, Heaviness</p> <p>in the body, Pain</p> <p>in Throat,</p> <p>Stiffness in</p> <p>Throat muscle,</p> <p>Mukha</p> <p>dourgandhyaSwas</p> <p>kricharata, Kasa,</p> <p>Atisara,</p> <p>Exertional</p> <p>dyspnoea.</p> <p>“JWARA</p> <p>CHIKITSA” in</p> <p>Kannada written</p> <p>by Dr.Swami</p> <p>Chandrashekhar</p> <p>Shastrimath</p> <p>edition 1972</p>	<p>Concept of</p> <p>Sankramikaroga</p> <p>Siddhanta</p> <p>Concept of</p> <p>Janapadadwams</p> <p>a siddhanta</p> <p>Concept of</p> <p>Krimisiddhanta</p> <p>Concept of</p> <p>Ritu</p> <p>Vaiparitya</p> <p>lakshanas are</p> <p>Kasa, Swasa,</p> <p>Pratishyaya,</p> <p>Shiroruja,</p> <p>Jwara. Su.Su.6</p>

Symptoms correlation with Corona virus in Arshya Granthas

Sl no	Signs and symptoms of corona	Sannipataja Jwara	Dushita Vayu	Raja Yakshma	Dushita Mamsa Sevana	Visha Upadrava
1.	Fever	✓	✓	✓		✓
2.	Tiredness	✓				
3.	Dry cough	✓	✓	✓	✓	✓
4.	Shortness of breath	✓	✓	✓	✓	✓
5.	Ache and pain	✓	✓	✓		✓
6.	Sore throat	✓		✓		
7.	Running Nose	✓	✓	✓	✓	
8.	Nausea	✓		✓		
9.	Diarrhoea	✓		✓		✓

Concepts in Ayurveda:

Concept of Vyadhikshamatva:

- ❖ **Importance of Immunity:** Especially in this condition poor immunity peoples (old aged) will get affected more and those who having good immunity power (Young aged) were not or less affected and recovering from the diseased condition is also depends on immunity of the individual. After the completion of the treatment procedure immunity of the person will get reduced and in normal person before the disease gets affected they have weak immunity so built the immunity in both the cases is very important. To improve the immunity of the individual medicines like Triphala, Ballataka, Madhu, Sarpi, Amalaki Rasayana, Trayupashamba, are the main role in improvement of Immunity of individual.
- ❖ **Importance of co- morbidity:** It will be seen in COPD – DM- HTN- Here mainly Ojokshaya is there so here utmost care should be taken. Basically these are the metabolic disorders and seen in the aged peoples, normally these are difficult to manage, when they combined with Covid-19 once again a challenge for the Vaidya to manage it. In this condition Jwara Upadrava especially Kapha Vata Dosha Upadrava Chikitsa has to Plan. In this condition different kinds of Pottali Prayoga can be adopted. These are some of the important Pottali Prayoga can be adopted Hema garbha Pottali, Pravala garbha pottali, Tamra Garbha Pottali, Lohagarbha Pottali ect.

Samanya Nidana Related to Utpatti Sthana (China)

Shushka Mamsa Sevana

In china many poisonous animals are used as routine food article that is a one of the cause for this disease manifestation. **Su.Su. 46**

Shushka Mamsa Sevanajanya Lakshanas:

When a person takes Shushka Mamsa (Dried meat of the Animals) it is one of the Causes for the symptoms similar to Covid-19. **Su.Su. 46**

Concept of Ritu Vyapanna or Ritu Vaiparitya

Because of the seasonal change there are some lakshanas will seen, they also looks similar as that of Covid-19. **Su.Su.6**

Concept of Aupasargika Roga or Sankramika Roga

Diseases which will seen with contact of man with infected women's, or it may visa versa, directly contact with body, Taking breath from one to another, Having food along with someone, Sharing the bed, Sharing clothes, garlands, application of different lepas due to all these factors diseases like Jwara, Shosha, Netrabhishyanda, and still more contagious disease will occurs in human beings. In present scenario by looking the intensity of spreading it can also compare with Covid-19. **Su.Ni.5**

Importance of 21 day Quarantine

If we consider the corona Virus as Visha, in this condition after 21 days intensity of the Visha will reduce by itself so for that reason patient has to stay in home for 21 days to avoid spreading from one person to another person. **A.Hr.U.37/66**

Visha Upadrava Lakshana

If we failed to manage Visha Chikitsa or even after proper management also we will get the some of the complications, for all those complications are similar as Covid -19 Symptoms and same Chikitsa has to plan. **A.San.U.47/1**

Chikitsa

Kashaya which is prepared by using Rajavruksha Phala, Ushira, Kashmarya, Ghana, Padmaka, mixed with Sharkara Given. **A.San.U.47**

Different types of Kashaya has to prepare by using Peetha, Tandula, Katuki, Sitopala is acts as Ajaji, Jivaka, Vrushabhaka, Utpala, Vishajanya Jwarahara Kashaya. Kolamajja, Sita, Dhanyaka, Bhargi, Yastyavha, Kesara, is good in Jwara, Vamana, Shwasa, Trushna.

Tripala, Aragvadha, Vyaghri, is indicated in Jwara and Vibandha. Balabilva, Vacha, Mustha, Kashaya, Punarnava, are indicated in Jwara, Agnisada, Shotha. **A.San.U.47**

Pippali+ Hingu+Kapitta+Saindhava+Sita made into Churna, this Churna has to give along with Makshika for the likable and it is indicated in Shwasa, Kasa, and Jvara. **A.San.U.47**

Draksha, Ngara, Krushna, or Triphala, Mustha has to be mixed with Ghrita and Madhu is good in Vishajanya Kasa. Or Patha, Anjana, Manjstha, Nishadwaya, Madhuka, Yasti, Kwatha has to prepare and given it will be benefitted in Kasa. **A.San.U.47**

Bhunimba, Mustha, Katuki, Trayamana, Indrayava, individually each Dravya has to take equal quantity Chitraka two part Kutaja Twak 8 part all together taken and made into Churna and given along with cold water. It is indicated in Visha, Atisara, Udavarta, Shwasa, Kasa, Jwara. **A.San.U.47**

PREVENTIVE:

Anutaila as Pratimarsha Nasya. **Cha. Su. 5/ 63-70.**

Dhumapana: Vartis Prepared of Chandana, Patra, Twak, Ela, Ushira, Padmaka, Madhuka, Mamsi, Guggulu, Agar, Sharkara, Udumbara, Ashwatta, Plaksha, Lodra, Musta, Shallaki,. These drugs can be used for external and internal purposes. **Cha. Su. 5/ 20-26.**

Ushna jala pana: Drinking warm water frequently does the Amapachana.

Sadrvtta palana: Following Rutucharya, Dinacharya, and Ratricharya

Asthangayoga- Like Shoucha

Pranayama, Dhyana and Kapalabhati

Achara Rasayana/ Nitya Rasayana: Ahimsaka, Adhyatma gnana praveena, Dani, Nitya tapaswi. Yukthi gnana of desha, kala pramana gnana. Japa, Shoucha, Brahmacharya palana, Pranidaya, Paropakara, **Cha.Chi. 1/4/30-35, R.R.S**

Hand wash Sanitizer:

- Nimba Kwatha, Panchavalkala Kwatha, Triphala Kwatha, Can be used even though if we used repeatedly used or dipping also it gives good result.
- Vidanga, Hardra, Guggulu, Yastimadhu, Triphala, Ghritakumari sidhha kwatha.
- Krimghagana siddha kashya.

If we consider the corona Virus as Visha, in this condition after 21 days intensity of the Visha will reduce by itself so for that reason patient has to stay in home for 21 days to avoid spreading from one person to another person. **A.H.Utt.37/66**

AVASTHIKA CHIKITSA YOGAS:

Kashaya:

- Guduchi, Shunti siddha kashaya- Jwara, Kasa, Nasasrava, Galashoola
- Haridra, Marich siddha kashaya

- Nirgundi, Pippali, Guda siddha kashaya
In case of Swasakrichrata, Galakandu, Kaphayuktakasa, Parshvashoola
- Pippali with Guda
- Haritaki, Bibhitaki with Madhu
- Vasa, Pippali, Yastimadhu, Shunti siddha kashaya
- Guda with Palandurasa.
- **Reference: Swayamvaidhya –Tiruka published by Malladyhalli and Reference: Hasirusamrakshane hasiru arogya, Published by Karnataka Aranya Ilake, Tumkur and Mysore.**

SHAMANACHIKITSA:

- **Bhargyadikwatha-** Swasa, Jwara. **Bhai. Rat Jwarachikitsa**
- **Darvyadikwatha-** Swasa, Kasa, Galagraha, Hikka Shosha and Jwara. **Bhai. Rat Jwarachikitsa**
- **Dashamulakwatha-** Kasa, Swasa, Parshvashoola, Kantagraha, Hridgraha **Bhai. Rat Jwarachikitsa.**
- **Bhargyadikwatha-** Sannipatajwara, Vishamajwara, Jeernajwara, Agnimandhya. **Bhai.Rat. 5/351 p.n 107**
- **Krimighnagana mahakshaya:** for internal use usual as Dupanachikitsa. **Cha.Su. 4/15**
- **Kantyamahakashaya:** When there is Kantakandu, Galashoola, Kantadaha, Swarakshaya, Swarabedha. **Cha.Su.4/9.** 10 kantya drugs are Sariva, Ikshumoola, Madhuka, Pippali, Draksha, Vidari, Kaidarya, Hamsapadi, Brahati and Kantakari.
- **Sudarshana churna:** Jwara, Swasa, Kasa –**Sahasrayoga**
- **Vidangadi leha:** Kasa, Swasa and Hikka. **Cha. Chi.18/ 52**
- **Sitopaladi churna:** Swasa, Kasa. **Cha. Chi.8/ 103**
- **Talisadhya churna:** Jwara, Swasa, Kasa. **Cha. Chi.8/ 245**

PRADEHA PRAYOGA

- Baladi Pradeha
- Kakolyadi Pradeha
- Shatavaryadi Pradeha
- Gugguladi Pradeha
- Padmakadi Pradeha
- Prapounadarikadi **Cha.Chi.8**

SHAMANA AUSHADHA:

- | | |
|---------------------|-----------------------|
| • Vasakasava | • Kankushtasava: |
| • Kanakasava | • Pushkaramulasava |
| • Sitopaladichurna | • Taleesadichurna |
| • Bharangyadichurna | • Pushakaradhyachurna |

- Swasanandagutika,
- Swasakutararasa
- Abhrakabhasma

- Shadangapaneeya
- Swasakasachntamani
- Dhanvantaragutika

EKAMULIKA

- Guduchi
- Tulasi
- Haridra
- Shunti
- Maricha
- Lavanga

- Ela
- Yastimadhu
- Pushkaramula
- Vasa
- Madhu
- Nimba

ANTIVIRAL HERBAL DRUGS:

- Bhumyamalaki
- Yastimadhu
- Tulasi
- Lashuna
- Shunti
- Parijatha
- Erandakarkati
- Asthishrunkala
- Chirabilva
- Shigru
- Chirat
- Ardraka
- Pashanabedha
- Dadima
- Nimbi
- Haridra
- Kutaja
- Kramarda
- Karaveera

KAVALA AND GANDUSHA YOGAS:

When there is Galshoola, Galakandu, Galashotha the following medications may be used in terms of Kavala and Gandusha.

1. **Katukadi kwata:** Katuki, Atasi, Pata, Daruharidra, Nagarmotha, Indrayava All Are Taken as Yavakoota Churna and Mix with Gomootra and Prepare Kwata. Which Shresta in Kanta roga.
2. **Patadi churna:** Pata, Rasanjana, Moorva, Tejohva Are Taken In Equal Quantity Churna is Prepared And Taken With Madu As Kaval Or Gandhush In Kantagata Rogas.
3. **Moordwika churna:** Draksha, Katuki, Triphala, Daruharidra, Triphala, Nagarmotha Taken in Equal Quantity Churna Mixed with Ghrata Manda and used as Mukhadhawana.
4. **Peetaka churna:** Shuddha Manasheela, Yavakshara, Haratala, Saindava, Daruharidra, All Churnas Taken in equal quantity mixed with Madhu used as Mukhadharana. Relieves All Types of Kantarogas and Mukharoga.
5. **Pippalyadi churna:** Pippali, Agaru, Daruharidra Twak, Yavakshara, Rasanjana, Pata, Tejohva, Haritaki all Churnas are mix with Madhu and use as Mukhadharana.

Cha.Chi.26

Kavala and Gandushartha kalpas explained by acharya Sushruta in his Nidanastana chapter no.16 are as follows.

1. Gandusha with Guduchi, Nimbakalka, Madu and Taila.
2. Gandusha with Triphala and Trikatu.
3. Brahat Panchamoola Kwata with Taila.
4. Apamarga Jatipatra, Dantimoola, Vidanga And With Taila For Gandusha.
5. Darvyadi kwata – Daruharidra, Rasanjana, Chitraka, Nagarmotha, Indrayava, Guggulu, Haritaki, Churnas Make Kashaya of that and mix with Madhu and use as Gandusha.
6. Yavakshara, Tejohva, Pata, Rasanjana, Marich, Daruharidra mixed with Madhu and use as Gandhusharta. **Su.Ni.16**

DAIVAVYAPASHRAYACHIKITSA:

- Vachadhupa
- Shirishdhupa
- Ashthangadhupa Yo.Rat
- Aparajitadhupa A.H.Chi.1/163
- Bhutajwardhupa- Kalyanakaraka

Dhupana: Dhupa prepared out of Vacha, Kushta, Haritaki, Sarshapa, Guggulu, Nimba, Ghrita, Madhu which purifies surrounding environment and destroys the toxic organisms. **A.H.Chi.1/162**

Dhupanachikitsa/ Homa Havana using Ghrita, Guggulu, Chandana, Vidanga, etc, purifies environment by destroying the cause, by all these self purification.

Tatra Daivavyapashara- mantra aushadha mani mangala bali upahara Havana/ homa Japa, Devadarshana, Pujana prayachitta upavasa swastharyana adi **A.H.Chi.1/165**

Adravyabhuta chikitsa: Santvana, Aswsana and Sthanaparityaga

Bhutabhishyangajwara- Jnana, Vijnana, Dhairya and Samadhi and Ekagrachittata pacifies Bhutabhishyangaja Jwara. **Bhai.Rat. 5/336 p.n 105**

Sahadevamula kanta bandhana within 1-4 days pacieis Bhutajwara. **Bhai.Rat. 5/339 p.n 106**

MANTRA CHIKITSA:

Vishnusahasranama- Sarva Jwarahanti. **Bhai.Rat. 5/416 p.n 114**

Mahamrityunjayamantra

IMMUNE BOSING:

IMMUNE BOOSTING FRUITS:

- **AMALAKI:**

Gunakarma: Amla, Madhura, Kashaya, Tikta and Katurasa, Guru, Ruksha and Sheetaguna, sheetaveerya, Madhuravipaka and Doshaghnata Tridoshashamaka.

Action: Deepana, Pachana, Jwaraghna, Balya, Ropana, Trishna, Grahi, Mutrala,

Hrudhya and Shothaghna.

Pharmacological Action: Antibacterial, Antioxidant Anti diarrheal, Anti hermetic, Antifungal and Anti diabetic.

Chemical Constituents: Tannin, Carbohydrates, Proteins, Riboflavin, Thiamine, Vitamin- C and Citric acid.

Nutrition: Rich in Vitamin C, Calcium and Tannin.

Indication: Jwara, Krimiroga, Atisara, Pravahika, Mukharoga, Kantharoga, Aruchi, Agnimandhya, Thrishna, Amlapitta.

- **DADIMA:**

Gunakarma: Madhuramla kashayarasa, Laghusnigdha, anushnaveerya vipaka madhuramla and Doshaghnata Tridoshashamaka.

Action: Lekhana, Vishaghna, Ruchya, Grahi, Kantya, Vatanulomaka.

Pharmacological Action: Antibacterial, Anticarcinogenic.

Chemical Constituents: Flavonoids C- glucosoids, Stigmasterol, Alkaloids, Linolenic acid, Protein, Vitamin-C, Ostheno.

Nutrition: Proteins, Carbohydrates and Minerals Calcium, Iron, Magnesium, Phosphorus and vitamins.

Indication: Ajeerna, Aruchi, Agnimandhya, Shwasa, Hikka, Atisara, Pravahika, Grahani, Arshas, Prameha, Raktapitta, Karnashoola, Nertraroga.

- **DRAKSHA:**

Gunakarma: Madhurarasa, Snigdha-gurumridu guna, Sheeta-verya, Madhuravipaka, Doshaghata Vatapittashamaka.

Action: Deepana, Pachana, Stambhana, Dahaprashamana and Chardhinigraha.

Pharmacological Action: Antipyretic, Antiviral, Hypoglycaemic, Anti fertility and Anti inflammatory.

Chemical Constituents: Glucosids, Sucrose, Tannin, Gallic acid, Malic and Oxalic acid, Oleanolic acid, Seed- 4- beta-glucoside, 5-hydroxymethyl.

Nutrition: Iron, Calcium, Magnesium, Potassium, Phosphorus helpful in proper development.

Indication: Ajeerna, Agnimandhya Atisara, Pravahika, Grahani, Twakroga, Raktapitta, Raktapradara, Raktatisara, Madhumeha, Phiranga and Upadamsha.

- **KHARJURA:**

Gunakarma: Madhurarasa, Snigdha-guna guru, Sheeta-verya, Madhuravipaka, Doshaghata Vatapittashamaka.

Action: Balya, Brumhana and Dahaprashamana, Snehana, Anulomana, Raktashodhaka, Mutrala and Vrushya.

Pharmacological Action: Antibacterial, anti-inflammatory, anti-diabetic, anti-asthmatic, nephroprotective, hepatoprotective and aphrodisiac activities. Fruit contains anthocyanins, phenolics, sterols, carotenoids, and flavonoids.

Chemical Constituents: Sterols, Carotenoids, Procyanidins and Flavonoids

Nutrition: Proteins, Vitamins, Carbohydrates and Calcium.

Indication: Madatyaya, Murcha, Bhrama, Gridhrasi, Vatavyadhi, Trishna, Chardi, Krimi, Atisara, Kasa swasa, Hikka, Mutrakrichra, Shotha and Kshaya.

- **ANJUR/ PHALGU:**

Gunakarma: Madhurarasa, Guru, Snigdha guna, Sheeta Veerya, Madhura Vipaka and Doshaghna Vatapittashamaka.

Action: Deepana, Pachana and Rochana, Krimighna, Balya, Brumhana, Vrunaropana, Raktashodhaka and Stambhana.

Pharmacological Action: Antipyretic, Antioxidant, Antibacterial, Antifungal, CNS and Cardiac stimulant, Cardio tonic, Hypoglycaemic and Diuretic.

Chemical Constituents: Amino acids, Gallic acids, Citric, malic acid, Riboflavin, Vitamin-C and Tannin.

Nutrition: Proteins, Carbohydrates, Minerals and Iron.

Indication: Atisara, Pravahika, Raktapitta, Krimi, Hridroga, Prameha, Aruchi and Agnimandhya.

- **AMRA**

Guna karma: Madhurarasa, Guru, Snigdha guna, Sheetaveerya, Madhuravipaka and Doshaghna Vatapittashamaka.

Action: Pittakara, Thishnashamaka and Rochaka.

Pharmacological Action: Anti inflammatory, Antifungal, Immuno modulatory, Antioxidative and insecticide.

Chemical Constituents: Vitamin C, Riboflavin, Proteins, Carbohydrates, Carotens, Malic, Lactic, oxalic and citric acid.

Nutrition: Proteins, Carbohydrate, Minerals Calcium, Tannin and Vitamins.

Indication: Jwara, Pratisyaya, Kasa, Aruchi, Agnimandhya, Arshas, Atisara, Shotha, Vatavyadhi, Twakroga, Netraroga and Karnaroga.

FUNCTIONS OF ACTIVE PRINCIPLES AND NUTRITION:

- **Tannin:** Accelerate blood clotting, reduce blood pressure, decrease serum lipid level, and modulate immune responses and antimicrobial activity.
- **Vitamin C:** Powerful antioxidant helps to lower blood pressure, help to reduce uric acid in blood, improve the absorption of iron and reduce risk of heart disease.
- **Calcium:** To build and maintain strong bones, proper functioning on heart muscles, nerves, prevent high blood pressure, protect against breast cancer.
- **Minerals** – Sodium, Potassium, Chloride, Calcium, Phosphorous, Magnesium, Sulphur.
- **Sodium:** Fluid balance, Nerve impulse transmission and muscle function.
- **Potassium:** Helps to regulate fluid balance, Muscle contractions, nerve signals, reduce blood pressure and water retention, protect against stroke and prevent osteoporosis and kidney stones, relief from anxiety and stress.
- **Chloride:** Fluid balance, maintain proper blood volume, blood pressure, pH of body fluids.
- **Calcium:** To build strong bones, for proper functioning of heart, muscles, nerves, in high blood pressure.
- **Phosphorous:** Build strong bones and teeth, filter out waste in kidney, managing energy storage, assess, maintain and repair tissue and cells. Produce D.N.A and R.N.A, body's genetic building blocks.
- **Magnesium:** Involved in biochemical reactions of body, boosts exercise performance, benefits against type 2 diabetes mellitus, can lower the blood pressure, anti-inflammatory benefits, prevents migraines, and reduces insulin resistance.
- **Sulphur:** Antibacterial effects against the bacteria that cause acne help to promote the loosening and shedding of skin.
- **Linoleic acid:** support of heart health, reduces total and L.D.L Cholesterol, improves insulin sensitivity and blood pressure.
- **Glycosides:** Antioxidant activity, Anticancer and anti tumour activity, Hepato protective activity, anti-inflammatory activity, anti diabetes activity, Antiviral activity, Antibacterial activity, Antifungal activity.
- **Oleanolic acid:** Anticancerous effects, Anti diabetic activity, Antimicrobial activity, Hepatoprotective activity, Antihypertensive activity, Antioxidant activity, Anti-inflammatory potential.

- **Gallic acid:** Antifungal, antiviral properties, antioxidant properties, cytotoxicity against cancer cells.
- **Mallic acid:** Boosts sport performance, improve body's absorption of creatinine, promote energy production, increase exercise endurance, help fight off muscle fatigue.
- **Lactic acid:** Control of intestinal infections, improved digestion of lactose, control of some types of cancer, control of serum cholesterol levels.
- **Oxalic acid:** No much good health effects, it's a normal end product of metabolism in a number of plant tissues, additional consumption may cause stone formation.
- **Amino acid:** Greater fat burn, building blocks of protein, prevents muscle damage, reduce mental fatigue, and improve muscle recovery, synthesis of hormones and neurotransmitters.
- **Riboflavin:** Helps the body to breakdown carbohydrates, proteins, fats to produce energy, allows oxygen to be used by the body.

HEALTH PROMOTIVE:

RASAYANA

1ST STAGE OF RASAYANA

- **Guduchirasayana**
- **Yastimadhursayana**
- **Pippalirasayana-**Kasa. Swasa, Hikka, Galaroga, Kshaya, Shosha, Galaroga, Vaiswarya, Peenasa, Jwra. **Cha.Chi. 1/3/36-40, A.H.U.39/98-100**
- **Shatapaka Vacharasayana-** Galaroga, Swarabedha
Dose: 10 ml two times before food **Anupana:** Milk, Ghee and Honey **Su.Chi. 28/7**
- **Saraswathaghrita:**
- **Saraswatarishta:** Swarakshaya, Manodosha, Rsayana Bhai.Rat. Rasayanaprakarana/ 182-195

Swasadi Rasayana: Sharkara, Madhuka, Draksha Mushali, Trayamana, Vasa, Guduchi, Kalinga, Vyosha and Triphala. **VANGASENA/ Rasayanadhikara p.n.932**

Khandakushmada- Kasa, Swasa, Jwara and Peenasa. **Yogaratnakara/Raktapittachikitsa p.n.359**

Vasakanda- Swasa, Kasa, Jwara Peenasa, Kshaya **Yogaratnakara/Raktapittachikitsa p.n.360**

Bhargiharitakiavalehya- Jwara, Kasa, Swasa, Peenasa, Hikka acta as Rasayana. **Yogaratnakara swasachikitsa p.n.434**

2ND STAGE OF RASAYANA

1. CHYAVANAPRASHA RASAYANA : Cha. Chi.1/1/62-69, A.H.U.39/33-41

Seavana labha/Phala : Visheshata Kasa, Swasa, Ksheena, Kshata Swarakshyaya, angavrudhi in Bala Uroroga, Hrudroga, Vatarakta, Trishna, Shukrasambandhi Vatadi Doshavikarahara. Medha Smriti, Kantiarogya, Ayu, Indriyabala, Maithunashakti, Jatharagnivrudhi, Varnakantivrudhi Vatanulomanam And Navayavanaprapti.

Cha. Chi.1/1/70-74, A.H.U.39/33-41, A.S.U.49/25, Ha.Sam.

Dose: 6 – 12 grams with water

Pharmacological Action: Antimicrobial, Antibacterial, Antioxidant, Immunomodulator and Anti inflammatory,

Chemical Constituents: Fruit: Vitmin C, Phyllembin Linoleic acids, Ellagic acid, Phyllemblic acid and acid and Salts

2. AGASTYA HARITAKI RASAYANA (AGASTYA HARITAKI :

Dose: 6 – 12 grams Warm water or Ksheera

Phala: Hikka, Kasa, Swasa, Kshaya, Hrudroga, Vishamajwara, Sangrahani, Arshas, Aruchi, Peenasa Valipalita, Varna ayu balakaram and acts as Rasayana.

A.H.Chi. 3/125-128, Bai. Rat. 15/ 173-178, A.F.I, Yogaratnakara p.n.414

3. VYAGRI RASAYANA:

Dose: 6 – 12 grams with Shritasheetajala or Mandhoshna dugdha

Phala :Peenasa, Swasa Sawarakshaya, Kshayaja, Kshataja, Vatika, Paittika, Kaphajanya, Dwidoshaja, Sannipataja, and Ekadasharupa upadravayukta Rajayakshma. This will acts as Rasayana. **Bai. Rat. 15/ 161-172, Yogaratnakara p.n.413**

4. KUSHMANDA KHANDA (KUSHMANDA RASAYANA) :

Matra :6 – 12 grams with Jala, Ksheera

Pala: Kasa, Swasa, Jwara, Urakshata, Kshaya, Swarabedha Puranajwara, Raktapitta, Chardi, Trishna, Shukra kshaya, Dourbalya Karshya, and Vaivarnya. It will acts as Rasayana.

Bai. Rat. 13/ 95-100, A.F.I

5. SHIVAGUTIKA :

Matra: 6 grams

Anupana : Ksheera, Mamsarasa, Dadimarasa, Sura, Asava, Madhu and Sheetalajala.

Phala: Kshaya, Shosha, Peenasa, Hikka, Kasa, Swasa, Damstravisha and Garavisha, Mantroushdha Prayoga, Mukharoga, Netraroga, Shiroroga, Anaha, Atisaraprameha, Yakritroga. **A.S.U.49/156, C.D.Rasayanadhikara/190, Bai.Rat. Rasayanaprakarana/151-175, Y. R. Rajayakshma**

Pharmacological Action: Immune stimulatory CNS stimulant, Antioxidant, Anti stress Immunomodulator.

Chemical Constituents: Alkaloids like piperlongumine, piperdine, piperic acid, Zingiberen, piperine, piplartine and glycoside

6. PIPPALI RASAYANA:

Dose: 10, 6, 3 Uttama, Madhyama and Avaramatra

Phalashruti: Kasa, Kshaya, Shosha, Swasa, Hikka, Galaroga, Vishamajwara, Vaiswarya, Peenasa, Arshas, Grahani dosha, Panduroga, Shopha, Gulma and Vatabalasakajwara.
Cha. Chi.1/3/32-35, A.H.U. 39/96-97, A.S.U. 49/52-56, Ma. Chi. Rasayanatantra/11-12

Pharmacological Action: Immune stimulatory, Antibacterial, Anti-inflammatory.....

Chemical Constituents: Alkaloids like Piperlongumine, Piperdine, Piperic acid, Zingiberen, Piperine, Piplartine, Glycosides.

7. LASHUNA RASAYANA:

Lashuna Matra : Avara matra-4 Pala, Madhyama matra- 6 Phala, Uttama matra-8 or 10 Pala, or 50 in number 60 in number and 100 in number Respectively.

Indication: Kasa, Swasa, Krimi, Jeernajwara, Agni and Bala vardhanartha Lashuna Rasayana is best. Astichuti, Astibhagna, Astiviyadhi, All Vatarogas, Arthavasambandhi roga, Veeryasambandhi roga, Bhrama, Kusta, Gulma, Kilasa, Kandu, Visphota, Vaivarnyata, Timira, Naktandya, Ashmari, Mutrakrichra, Baghandhara, Pleeharoga, Shosha,Vatarakta it also enhances Medha. **A.H.U.39/129,A.S.U.49,82-111, Ka.Sam. Lashunakalpana**

AHARAKALPS:

- Yavagu prepared or Vidanga, Pippali, Shigru, Maricha with Takra and Sauvarchala – is Krimighna. **Cha. Su. 2/23.**
- Yavagu prepared of Dashamoolas cures Kasa, Hikka, Swasa and diseases due to kapha. **Cha. Su. 2/27.**
- Milk of Sheep and Goat: Kasa, Jwara, Hikka and Swasa. **Cha.Su.27/ 222**
- Yavagu prepared of laja saktu (powder of fried paddy) in jwara. **Cha. Chi.1/155**
- Yavagu prepared of vidaryadi gana dravya when jwara associated with kasa, swasa and hikka. **Cha. Chi.1/184**

DOS AND DON'T DOS

PATHYA	APATHYA
<p>Ahara: Puranashali, Sahstikashali Patola, Mudga, Karkotaka, siddha Yusha. Saveera, Tushodaka, Shukti Raga, Kambalika, Veshavara, Puranasarpi.</p> <p>Vihara: Snana, Nritya, Pranayama Phalas: Draksha, Kapittha, Dadima, Amalaki, Kharjura, Aushadha: Ardraka, Shunti, Rasona, Krishnatulasi, Trikatu, Pushkaramula, Ela, Lavanardraka, Ghritabharjita hingu, Gomutrapana Haritaki, Tilataila, Sarshapataila, Madhu Mutra of Ushtra, Chagamutalepa.</p> <p>Havana, Dana, Brahmana devata puja pathya. Geeta, Avagaha, Dhumapana, Uttamagrihavasa, Ahimsaka, Adhyatma gnana praveena, Dani, Nitya tapaswi. Yukthi gnana of Desha, Kala Pramana gnana. Japa and Shoucha.</p>	<p>Ahara: Prakritiviruddha annapana Asatmyabhojana, Viruddha anna Pashupakshimamsarasa Madhya, Janghala, Dushtambu, Dushtaanna, Matsyasevana,</p> <p>Vihara: Atapa, Dushtavayusevana, Rajosevana Bhramana, Vyavaya, Ratrijagarana</p>

TABLE SHOWING RESEARCHES ON RASAYANA

SL.NO	NAME OF THE TOPIC	CENTRE
1.	Controlled Clinical Study To Evaluate The Role Of Naimittika Rasayana In Rajayakshma With Special Reference To Pulmonary Tuberculosis”	Government Ayurvedic Medical College, Mysore Karnataka-2002
2.	Comparative Study of Pranayama and Vardhamana Pippali Rasayana in Tamakaswasa.	S.D.M. College of Ayurveda and Hospital, HASSAN. Karnataka-2004
3.	“A study on Agastya Haritaki Rasayana in improving the nutritional status in patient of Rajayakshma”.	S.D.M. College of Ayurveda and Hospital, HASSAN. Karnataka-2005

***PROTOCOL DEVELOPED BY
DR.RAGHAVENDRA NAIK***

Ayurvedic Diagnostic and Management protocol for COVID-19

Submitted by

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INDEX

S NO	TOPIC	PAGE NO
1	INTRODUCTION	3
2	EPIDEMIOLOGY	3
3	SIGNS AND SYMPTOMS	3
4	JANAPADODHWAMSA ROGA- CUASE OF EPIDEMIC ACC TO AYURVEDA	3
5	POSSIBLE CORRELATION OF COVID-19 IN AYURVEDA	4
6	AYURVEDIC CONCEPT IN THE ETIOLOGY OF COVID -19	4
7	PREVENTION	5
	7.1 WHO Guidelines	5
	7.2 Ayurveda principles	5
8	MANAGEMENT	6
	8.1 MODERN MANGEMENT	6
	8.2 AYURVEDIC CONCEPT	7
	8.3 SELECTION OF DRUGS	7
	8.3.1 SYMPTOMATIC TREATMENT	7
	8.3.2 GENERAL HEALTH PROMOTERS	12
9	STAGewise MANAGEMENT	13
	9.1 PROPHYLACTIC MANAGEMENT-NON INFECTED CASES	13
	9.2 MANAGEMENT OF HIGH RISK GROUP	14
	9.3 MANAGEMENT OF SUBJECTS EXPOSED TO RISK	14
	9.5 MANAGEMENT OF ACTIVE CASES	15
	9.6 MANAGEMENT OF COMPLICATED CASES	15
10	REFERENCES	15

1. INTRODUCTION

The concept of epidemics is very well defined and established in Ayurveda. Acharya Charaka (1500BC - 400AD), had mentioned epidemic conditions under the heading ‘Janapadodhwamsa’. Numerous methods of prevention and control of epidemics, measures for environmental sanitation find an important place in Ayurvedic literatures. The recent outbreak of COVID-19 has caused considerable discomfort and morbidity to certain extent among the affected population. There is no specific allopathic management for this disease and vaccine is under investigation. The contemporary modalities of management encompass the use of medication for symptomatic relief. Ayurveda offers number of preventive measures, single drugs, compound herbal and herbo-mineral combinations, may be rationally used to combat such conditions.

2. EPIDEMIOLOGY

Coronaviruses are a group of viruses belonging to the family of Coronaviridae, which infect both animals and humans. Human coronaviruses can cause mild disease similar to a common cold, while others cause more severe disease (such as MERS - Middle East Respiratory Syndrome and SARS – Severe Acute Respiratory Syndrome). A new coronavirus that previously has not been identified in humans emerged in Wuhan, China in December 2019.¹

3. SIGNS AND SYMPTOMS

According to WHO, the most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhea. These symptoms are usually mild and begin gradually. Some people become infected but don’t develop any symptoms and don't feel unwell. Most people (about 80%) recover from the disease without needing special treatment. Around 1 out of every 6 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart problems or diabetes, are more likely to develop serious illness.²

4. JANAPADODHWAMSA - CUASE OF EPIDEMIC ACC TO AYURVEDA

In Ayurveda, there is thinking of epidemics under the term of Janapadodhwamsa where it is mentioned that, due to either of deranged *Vayu* (air), *Jala* (water), *Desha* (habitat) and *Kala* (seasons), certain diseases arise which kill mass of people. These diseases can be

considered as either airborne or waterborne infectious diseases or diseases occurring due to soil contamination or conditions arising due to weather or seasonal hazards. Further, under the heading of *Adidaivika Bala Pravritta Vyadhi* (diseases arising due to such causes that cannot be controlled by human intelligence), terms such as *Sansargaja* and *Upsragaja* are mentioned which indicate that there are certain diseases which can be transmitted directly from infected persons to healthy persons such as contagious diseases or certain diseases can be transmitted by respiration/air borne. As per the hints available in Ayurveda, the management of these infectious diseases can be either preventive or curative. For example, now the changes in weather or seasons can be predicted and thus, before starting of epidemics which are most likely to occur in that weather, adequate arrangements and planning can be done so as minimize the morbidity.³

5. POSSIBLE CORRELATION OF COVID-19 IN AYURVEDA

Though there is no direct reference related to COVID-19 in Ayurveda, it can be equated with the condition when Jvara is associated with Cough, Body ache etc. In Ayurvedic literature, we can find such references where fever is associated with Kasa, pratishyaya, angamarda etc. The symptoms of Vata Kapha Jvara are similar to the symptoms of COVID-19 to some extent. Characteristic features of vata-kaphaja jvara as per Charakasamhita are sheetaka (cold), kasa (cough), gourava (heaviness of the body), tandra (drowsiness), pratishyaya (running nose), and shirograha (headache), and moderately high rise of fever.⁴ Symptoms mentioned for Vata kaphaja jvara in Astanga hridaya of Vagbhata may be correlated with acute fever due to upper respiratory tract infection (URTI) and other associated symptoms like Shvasa, kasa, peenasa, shirashula and parvabheda.⁵

6. AYURVEDIC CONCEPT IN THE ETIOLOGY OF COVID -19

नास्ति रोगो विना दोषैर्यस्मात्तस्माद्विचक्षणः ।

अनुक्तमपि दोषाणां लिङ्गैर्व्याधिमुपाचरेत् ॥१९॥ Su. Su 35/19

As per Ayurvedic principles there is no disease without the involvement of Dosha. Even if the disease is not enlisted in classical texts (Anukta vyadhi), the associated dosha should be analyzed based on the presentation of symptoms (Linga) in a given patient and the treatment should be planned accordingly.

Accordingly, based on the symptoms and presentation, the samprapti of COVID-19 can be drawn as follows

- **Dosha-** Specifically aggravated **Vata dosha** (Usually more old age, end of the day and cold Environment ie. Vata predominant conditions) and **Kapha dosha** (symptoms are usually mild and begin gradually). In severe cases all the three doshas are involved
- **Dushya- Rasa** (Symptoms related to involvement of Rakta dhatu are not seen excluding the possibility of progression to Rakta)
- **Agni-** Mandagni
- **Srotas-** Rasavaha and Pranavaha
- **Sroto dushti prakasa-** Atipravrutti and sanga
- **Udbhava sthana-** Amashaya
- **Sanchara sthana-** Urdhva shareera

7. PREVENTION

7.1 WHO Guidelines

WHO recommends following precautionary measures to prevent infection and to slow transmission of COVID-19, do the following:

- Wash your hands regularly with soap and water, or clean them with alcohol-based hand rub.
- Maintain at least 1 metre distance between you and people coughing or sneezing.
- Avoid touching your face.
- Cover your mouth and nose when coughing or sneezing.
- Stay home if you feel unwell.
- Refrain from smoking and other activities that weaken the lungs.
- Practice physical distancing by avoiding unnecessary travel and staying away from large groups of people.

7.2. Ayurveda principles

According to Acharya Sushruta following are the modes of transmission of the disease. As a first and foremost preventive measure one should avoid these activities.

- प्रसंग- Close interaction with a person
- गात्र संस्पर्श – Physical contact with the diseased individual
- निश्वास – Maintining distance to prevent transmission through inhalation or droplet infection
- सहभोजन- close contact such as sharing food
- सह शय्या – sleeping together
- सह आसन- using same sitting arrangements
- वस्त्रमाल्यानुलेपन- using same cloths, cosmetics etc.

Regular practice of Nasya, Dhumapana, Kavala is beneficial.

Intake of Laghu ahara (Diet which is light to digest)

Regular intake of Ushnodaka (Hot water)

Disinfecting the environment with Dhoopana (Fumigation) by using different dhoopana dravya like Aparajita dhoopa, rakshoghna dhoopa, Nimba, Haridra, Vidanga, guggulu etc

8. MANAGEMENT

8.3 MODERN MANGEMENT

Ministry of Health & Family Welfare Directorate General of Health Services (EMR Division) published some Guidelines on Clinical Management of COVID – 19. This document provides guidelines for implementation of infection prevention and control measures for patients with suspected or confirmed COVID - 19 infection, Early supportive therapy and monitoring, Management of hypoxemic respiratory failure and ARDS, septic shock etc.

There is no current evidence from RCTs to recommend any specific treatment for suspected or confirmed patients with COVID - 19. No specific anti-virals are recommended for treatment of COVID – 19 due to lack of adequate evidence from literature. The use of Lopinavir/ Ritonavir in PEP regimens for HIV (4 weeks) is also associated with significant adverse events which many a times leads to discontinuation of therapy. In light of the above, Lopinavir/ Ritonavir should ONLY be used with proper informed expressed consent on a Page | 15 case to case basis for severe cases, within the under-mentioned framework along with supportive treatment as per need.⁶

8.2. AYURVEDIC CONCEPT

According to Acharya Charaka,

संसृष्टान् सन्नपितान् बुद्ध्वा तरतमैः समैः॥२८७॥

ज्वरान् दोषक्रमापेक्षी यथोक्तैरौषधैर्जयेत्। Charaka samhita chikitsa 3/285

In the case of *samsrishta* and *sannipataja* (combination of two or all the three *doshas*) type of *jwara*, the *tara*, *tama* and *sama* (lesser, greater or equal) status of the vitiated *doshas* should be ascertained and the treatment planned according to the line of treatment and drugs prescribed for that *dosha*.

8.3. SELECTION OF DRUGS

Generally drug selection in epidemics like COVID-19 should be based on its symptoms related to the involvement of Dosha. As the initial symptoms related to the disease mainly related to vitiation of Vata and Kapha doshas, the drugs which are having Vata and Kaphahara properties should be selected. Since the Vata and Kapha are having opposite properties and administration of drugs having opposite properties to one Dosha leads to vitiation of another Dosha, careful selection of drugs is most important. In such cases, drugs having Usna virya can show the instant effect. Apart from this, the treatment modalities of COVID-19 can be categorized into symptom modifiers and general health promoters. The drugs/formulations having symptom specific indications along with reported research related to that indication can be selected for the administration. General health promoting agents that improve quality of life, provides strength or resistance against the disease can be considered under this category. The drugs/formulations having Rasayana, Balya etc properties and reported for their Immunomodulatory, antioxidant etc properties can be categorized under this. Some examples of drugs/formulations that can be prescribed as symptoms modifier as well as General health promoters are listed below.

8.3.1 SYMPTOMATIC TREATMENT

A. Single drugs

S No	Name	Properties according to Ayurveda	Indications in classical texts
1.	Shunthi with	Properties: Katu, Ushna,	अरुचिमनलमांद्यां पीनसश्वासकासानुदक दोषनाशु

	Madhu	Snigdha, Vata kaphahara , Deepana, Pachana Indications- Kasa, Shvasa,	हन्यादसेशन । जनयति तनुकांतिम चित्तनेत्र प्रसादम पलपरिमितः शुंठीक्षौद्र सिद्धः कषायः ॥ 1/831 (Bhavaprakasha)
2.	Pippali with Madhu or Guda	Properties: Katu, Snigdha, Anushna, Kaphavatahara, Vrishya, rasayana, Deepana, Pachana Indications- Jvara, Kasa, Shvasa,	पिप्पली मधुसंयुक्ता मेदःकफविनाशिनी । श्वासकासज्वरहरा वृष्या मेध्याऽग्निवर्धिनी ॥१३॥ जीर्णज्वरोऽग्निमान्द्ये च शस्यते गुडपिप्पली । (Bhavaprakasha)
3.	Haridra	Properties: Katu, Ushna, Laghu, Ruksha, Kaphahara,	सिंहास्य रस संसिद्ध हरिद्रा खंड चूर्णकर्म । दुग्धसंतानिका लीढं शुष्क कासनिर्हणं ॥ सिद्ध भेषज
4.	Tulasi with Marich churna	Properties: Tikta, Laghu, Ruksha, Ushna, Katu vipaka, Vata-kaphahara, Deepana, Indications- Shvasa, Kasa,	पीतो मरीच चूर्णेन तुलसी पत्रजो रसः । द्रोणपुष्पी रसो वापि निहन्ति विषमज्वरान ॥ 13 ॥ (Yogaratanakara, Sharangadhara samhita)
5.	Lashuna	Properties:, Katu, Ushna, Vata-kaphahara, Deepana, Indications- Jvara, Shvasa, Kasa,	रसोन कल्क तैले न सर्पिषा वा तिलैरपि । सेवितं विषमं हन्ति वातश्लेष्म गदानपि ॥ 11 ॥ Yogaratanakara
6	Kiratatikta	Properties:, Katu, Tikta, Laghu, Ruksha, Indications- Sannipata Jvara, Shvasa, Kasa,	ननु रामसेन फांटः प्रविरल धान्याक दल धन्यः । किं कुरुते वैद्यपते ज्वरम झटिति जर्जरीकुरुते । सिद्ध भेषज ४/32

Research updates

1. *Zingiber officinale* Roscoe

In an experimental study, effect of hot water extracts of fresh and dried gingers on HRSV was tested by plaque reduction assay in both human upper (HEp-2) and low (A549) respiratory tract cell lines. Ability of ginger to stimulate anti-viral cytokines was evaluated by enzyme-linked immunosorbent assay (ELISA). Fresh ginger dose-dependently inhibited HRSV-induced plaque formation in both HEp-2 and A549 cell lines ($p < 0.0001$). The study concluded that, fresh ginger of high concentration could stimulate mucosal cells to secrete IFN- β that possibly contributed to counteracting viral infection.⁷ Intravenous (i.v.) administration of (6)-gingerol (at 1.75-3.5 mg/kg) or (6)-shogaol (at 1.75-3.5 mg/kg) and oral administration of them (at 70-140 mg/kg)

produced antipyretic effect. In addition (6)-Shogaol also showed an intense antitussive effect in comparison with dihydrocodeine phosphate.⁸ Ginger and its isolated active components, [6]-gingerol, [8]-gingerol, and [6]-shogaol, relax ASM, and [8]-gingerol attenuates airway hyperresponsiveness, in part by altering $[Ca^{2+}]_i$ regulation. These purified compounds may provide a therapeutic option alone or in combination with accepted therapeutics, including β_2 -agonists, in airway diseases.⁹ In a clinical trial to evaluate the effect of ginger on inflammatory factors in the respiratory profile of patients with ARDS, Thirty-two ARDS patients were randomized to receive ginger or placebo. Ginger supplementation was found to significantly lower inflammatory cytokines; IL-1, IL-6, and TNF- α . Improvements in oxygenation were also observed with ginger supplementation. This data shows promise for the use in ginger in enteral diets and formulations for patients with ARDS, potentially improving gas exchange, decreasing the duration of mechanical ventilation and ICU stays.^{10, 11} In addition, ginger ameliorated allergic asthma by reducing allergic airway inflammation and suppressed Th2-mediated immune responses in mice with ovalbumin-induced allergic asthma.¹² Moreover, the water-extracted polysaccharides of ginger could decrease times of coughing, which was induced through citric acid in guinea pigs.¹³ Besides, ginger oil and its bioactive compounds, including citral and eucalyptol, inhibited rat tracheal contraction induced by carbachol in rats.¹⁴

The above results indicate that ginger and its bioactive constituents, including 6-gingerol, 8-gingerol, 6-shogaol, citral, and eucalyptol, have protective effects against respiratory disorders, at least mediating them through the induction of relaxation in airway smooth muscle and the attenuation of airway resistance and inflammation.¹⁵

2. *Piper Longum* Linn.

The fruit effectively reduce passive cutaneous anaphylaxis in rats and protect guinea pigs against antigen-induced bronchospasm; a 30% protection of mast cells was observed in an in vitro study. Studies conducted on children revealed that long-term use of fruits decreased (58.3%) severity of bronchial asthma attacks. Piperine decreased the rate and amplitude of respiration and showed nonspecific blockade of acetylcholine, histamine 5-hydroxytryptamine induced spasm on isolated guinea pig and rabbit intestine.^{16, 17} Decoction and alcoholic extract of Amalakyadi Gana (Pippali is one of the ingredient) has moderate antipyretic activity in rats, which may be due to inhibition of the synthesis and/or release of local PGE2.¹⁸

3. *Curcuma longa* L.

A study reported that, curcumin inhibits the infectivity of enveloped viruses. In all analyzed enveloped viruses, including the influenza virus, curcumin inhibited plaque formation. The study provided the insights on the molecular antiviral mechanisms of curcumin and its potential use as an antiviral agent for enveloped viruses.¹⁹ Numerous *in vitro* and *in vivo* studies have shown that curcumin is active against different viruses, bacteria and fungi, including even highly pathogenic, emerging and multi-drug-resistant strains.²⁰ Using a well-established model of reovirus 1/L-induced acute viral pneumonia, which displays many of the characteristics of the human ALI/ARDS, a study evaluated the anti-inflammatory and anti-fibrotic effects of curcumin. Administration of curcumin significantly modulated inflammation and fibrosis, as revealed by histological and biochemical analysis. The expression of IL-6, IL-10, IFN γ , and MCP-1, key chemokines/cytokines implicated in the development of ALI/ARDS, from both the inflammatory infiltrate and whole lung tissue were modulated by curcumin potentially through a reduction in the phosphorylated form of NF κ B p65.²¹ Extract of *C. longa* also proved as a potential antiviral against DENV with low cytotoxicity and effective inhibition.²²

4. *Ocimum sanctum* Linn

The essential oils like Eugenol of Tulsi leaves produce anti-viral activity.²³ The extracted components of this plant like linalool, apigenin and ursolic acid show broad spectrum antiviral activity.^{24,25,26} *Ocimum sanctum* in the dose of 100mg/kg and 300mg/kg significantly reduced yeast induced pyrexia. The antipyretic effect of *Ocimum sanctum* is dose dependent and the effect is as a result of the flavonoid component of the extract. The mechanism of action could be by inhibition of release inflammatory mediators and prostaglandins.²⁷ It has been reported to be a strong antioxidant against oxidative stress, genotoxicity and imbalanced xenobioticmetabolizing enzymes induced by 7,12- dimethylbenz [a] anthracene in rats.²⁸ In a study, it is also predicted that hydroxy group on 4 th position of phenyl ring is responsible for bronchial smooth muscle relaxation. Presence of methoxy and propylene group on the phenyl ring may confer a maximum β -activity and selectivity. The presence of ursolic acid in the volatile oil may be responsible for anti-inflammatory activity, which may be due to inhibition of COX.²⁹

5. *Allium sativum* L.

A study was carried out to evaluate the effect of *Allium sativum* (Garlic) extract on infectious bronchitis virus in specific pathogen free embryonic egg. Infectious bronchitis virus (IBV) is a coronavirus. The available vaccines against IBV cannot cover new variants. The study was done in four groups of embryonic SPF eggs; first group was used for virus titration; second group received the mixture of different virus titration and constant amount of garlic extract; third group received 10^{-3} titration of virus and after 8 hr received garlic extract and the last group received different dilutions of garlic extract. The results showed that as a primary mixture of different strains of IBV and garlic extract had greater inhibitory effects on non-acute strain than acute one and using garlic extract as a treatment 8 hr after exposure to different strains of IBV had a significant inhibitory effect which was similar on both field and vaccine strain.³⁰ It is reported that, the S-ethyl cysteine or S-methyl cysteine can protect bronchial cells and respiratory epithelia.³¹ Garlic was found to be able to maintain the immune system homeostasis and to exhibit beneficial effects on immune cells especially through regulation of proliferation and cytokine gene expression. One of the main mechanisms observed is through modulation of cytokine profiles and, on the other hand, direct instruction and stimulation of immune cells. It is suggested that the garlic beneficial effects are attributed, in particular, to sulfur-containing compounds, some polyphenols, and flavonoids.³²

6. *Swertia chirata* Buch Ham.

In an experimental study, the aqueous extract of *Swertia chirata* Buch Ham. Root (ASC) (Family: Gentianaceae) was evaluated for its antipyretic potential on Brewer's yeast induced pyrexia in albino rats and Typhoid-Paratyphoid A, B vaccine induced Hyperexia in rabbits. In both models, the extract, at dose of 200 mg kg⁻¹ body wt. and 400 mg kg⁻¹ body weight, produced significant (p<0.001) reduction in elevated body temperature in a dose dependent manner.³³

B. Compound formulations

S No	Name	References	Indications	Research updates
1.	Tribhuvana kirti rasa	Rasamruta chapter 9: 80-81	Sarva jvara	
2.	Mrityunjaya rasa	Bhaishajya ratnavali Jvaradhikara 409-418	Vishama jvara, Teevra jvara	Antipyretic effect ³⁴

3.	AYUSH 64	Antimalarial formulation developed by CCRAS, AYUSH ministry	Vishama jvara	Antimalarial activity ³⁵
4.	Amrutottara kashaya	Sahasrayoga Kashaya Prakarana 30	Jvara due to vitiation of all the dosha	
5.	Pippalyadi kashaya gana	Bhavaprakasha samhita 1/406	पिप्पल्यादि गण क्वाथं पिबेत् वातकफज्वरी । नातः परः किंचिदस्ति ज्वरे भेषजमुत्तमम् ॥	Antipyretic effect ³⁶
6.	Dashamula katutraya kashaya	Sahasrayoga Kashaya Prakarana 107	Shvasa, kasa, Parshva shula	

8.3.2. GENERAL HEALTH PROMOTERS

According to Ayurveda when immunity becomes weak, the virus and bacteria can develop and multiply in the body. One's immune system must be boosted so that the body can fight against bacteria and virus and prevent diseases. The agents that improve Quality Of Life, provide strength or resistance against the disease and also facilitate early recovery are classified under General Health Promoters. The drugs/formulations having Balya (Tonic), Rasayana (Immunomodulator) etc properties can be considered under this group.

B. Single drugs

S No	Name	Properties according to Ayurveda	Classical indications
1.	Guduchi	Properties- Katu-tikta, Tridosahara, grahi, rasayana Medhya, Balya, deepana, Vayasthapana Indications- Kasa, shvasa, jvara, krimi	छिन्ना सत्वं हरति सकलं दुस्तरं तीव्रतापम । काले चोक्तं भवति च नृणाम यौवनेषु ज्वरेषु ॥ दाहं मेहं ज्वरमरुचि तृटश्वास पाण्डु अर्श हिक्काः ॥ Yogaratnataka रसो गुडुच्यास्तु मेध्यानि चैतानी रसायनानी ।च सं चि १.३.30-31

2.	Yashtimadhu	Properties- Madhura, sheeta, balya, Rasayana, snigdha Indications- Kshaya, Hikka, trishna, Shosha	क्षीरेण यष्टीमधुकस्य चूर्णम् मेध्यानि चैतानी रसायनानी च सं चि १.३.३०-३१
3.	Ashwagandha	Properties- Katu, Tikta, Laghu, Ushna, Vatakaphahara, Balya, rasayana, shukrala Indications- Kshaya, Kasa, Shvasa	पीताश्वगन्धा पयासार्ध मासं घृतेन तैलेन सुखाम्बुना वा कृशस्य पुष्टिं वपुषो दधाति नरस्य सस्यस्य यथाम्बु वृष्टिः Yoga ratnakara 510
4.	Haritaki	Properties- Madhura, Laghu, ruksha, Ushna, tridosahara, Rasayana, Medhya, Deepana Indications- Vishama jvara, shvasa, kasa, Hikka	सिंधूत्था शर्करा शुंठी कणामधु गु डै : क्रमात् वर्षादिश्व भया प्राश्या रसायन गुणैःशिनः Yoga ratnakara 506

C. Compound formulations

S No	Name	References	Indications	Research updates
1.	Chyavanaprasha avaleha	Charaka samhita chikitsa sthana 1/1:62-74	Rasayana, Medhya, Hikka, Kshata kshina	Antioxidant and anti-anxiety ^{37,38} , Immunomodulatory ³⁹
2.	Agastya haritaki avaleha	Astanga hridaya chikitsa sthana adhyaya 3/125-130	Vishama jvara, pancha kasa, shvasa, hikka, rasayana, balya, peenasa, aruchi	Clinical study- Shvasahara karma ⁴⁰

9. STAGEWISE MANAGEMENT

9.1. PROPHYLACTIC MANAGEMENT-NON INFECTED CASES

As the reason for disease is due to Janapadodhvamsa, preventive guidelines mentioned for the same can be followed.

Avoid

- प्रसंग- Close interaction with a person
- गात्र संस्पर्श – Physical contact with the diseased individual
- निश्वास – Maintaining distance to prevent transmission through inhalation or droplet infection
- सहभोजन- close contact such as sharing food

- सह शय्या – sleeping together
- सह आसन- using same sitting arrangements
- वस्त्रमाल्यानुलेपन- using same cloths, cosmetics etc.

Follow

- Regular practice of Nasya, Dhumapana is beneficial.
- Intake of Laghu ahara (Diet which is light to digest)
- Regular intake of Ushnodaka (Hot water)
- Disinfecting the environment with Dhoopana (Fumigation) by using different dhoopana dravya like Aparajita dhoopa, rakshoghna dhoopa, Nimba, Haridra, Vidanga, Guggulu etc.

9.2.MANAGEMENT OF HIGH RISK GROUP

According to WHO, People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe disease and death. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

Separate management guidelines for these High risk groups along with treatment protocols for existing co-morbid conditions are necessary.

9.3.MANAGEMENT OF SUBJECTS EXPOSED TO RISK

- Administration of Deepana Pachana dravya (To activate immune system)
- Drugs/formulations for Dhatugata Ama pachana.- After this stage only Balya rasayana drugs can be administered
- Vishama jvarahara kashaya
- Langhana/Laghu Ahara sevana
- Abhyanga with taila like Brahat saindhavadya taila (For dhatugata ama pachana)

Diet

Peya prepared from Kanthakari, Gokshura etc.

श्वदंष्ट्रा कंठकारिभ्यां सिद्धां ज्वरहरी पिबेत् || Bhavaprakasha

Yavagu prepared from Ushna veerya dravya

Intake of vegetables like Patola, Karavellaka, Patha, Punarnava etc indicated in Jvara chikitsa

9.4. MANAGEMENT OF ACTIVE CASES

- **Symptomatic management** (Based on symptoms and involvement of Dosha)
- **Jvara-** Amrutottara kashaya, AYUSH-64, Mrityunjaya rasa, tribhuvana kirti rasa, Pippalyadi gana kashaya, Amritarishta, sanjivini vati etc
- **Jvara with Kasa-** Talisadi churna, sitopaladi churna, yashtimadhu churna, Dashamula kwatha, Kanthakari kwatha, Samirapannaga rasa etc
- **Jvara with pratishyaya-** Laxmivilasa rasa, Dashamula katutraya kwatha
- **Jvara with Shvasa-** In addition to the above, Shvasahara drugs can be added (Kanakasava, Shvasa kuthara rasa etc)

9.5. MANAGEMENT OF COMPLICATED CASES

Stage of Upadrava. Multi organ involvement or multi organ failure leading to asadhya stage.

Needs emergency management and modern intervention.

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***PROTOCOL DEVELOPED BY
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Management of Epidemic Fever according to Ayurveda.

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In the context of *Janapadodwamsa*, *Acharya Charaka* explained pandemics which destroy the community in mass and the necessary steps to control such situations.

The term *sankramanti naraanaraam* means the out burst of certain diseases that disperse from person to person and affect a community. These are termed as *Oupasargika Rogas*. The modes of transmission of these diseases explained in Ayurveda Samhitas are the very practical way in which these epidemics are spreading out now a days. Observing them and following the contrary, which basically aims at social distancing, helps to break the chain of these epidemics, and are very appropriate in controlling many epidemics including Coronavirus all over the world.

The different manner in which these epidemics spread amongst a population as explained in our classics are,

- ❖ *Prasangat*: by physical contact / sexual intimacy
- ❖ *Gatra samsparshanaat*: by touching the affected person
- ❖ *Nishwaasaat*: when exposed to exhaled air of the affected person including the droplet while coughing/ sneezing.
- ❖ *Saha bhojanaat*: having food together where contaminated food or cutleries play the role of transmission.
- ❖ *Saha shayya*: Sharing of bed, pillows or blankets of the infected person poses a threat of spread of disease in a normal person.
- ❖ *Saha aasana*: sharing seats specially in crowded public transports like bus, trains etc. Definitely spreads epidemics.
- ❖ *Ganda*: Bindi sticker when reused by others.
- ❖ *Mala*: exchange of flowers, garlands, ornaments etc.

❖ *Anulepana*: sharing of personal things like cosmetics, clothing etc. always carry a risk of transmitting certain contagious diseases.

In early times certain rituals were strictly practiced at temples, shrines and sanctuary places in the name of cleanliness and purity. These practices basically aimed at social distancing and reducing the risk of contamination. The need of the hour is to adapt these practices amongst the masses to grossly prevent these epidemics.

Line of management:

The presentations explained in Ayurveda as the *poorvarupa* (premonitory symptoms) of *Jwara* and *Pratishyaya* are seen as common manifestations in the initial stage of viral infestations affecting the respiratory system. Moving ahead, while explaining the treatment, primary importance is given to the immunity/ disease resistance capacity of the patient. It is said that for fast recovery, good prognosis and to prevent worsening of the disease, immunity needs to be looked after along with symptomatic treatment.

ÌuÉSKEÉÈiÉ euÉUESÉæ uÉE oÉSÉqÉç rÉ!ÉâlÉ mÉÉsÉrÉlÉç |

Balam / immunity is to be protected and promoted as primary step in *jwara aadi* conditions.

oÉSÉÉÍkÉ,ÉlÉqÉÉUÉâarÉqÉç AÉUÉâarÉÉjÉiÈ ÌçürÉÉçüqÉÈ ||

If the resistance of the patient is strong enough, then the disease can be easily combated establishing normalcy.

Medicated diet:

1. Medicated gruel:

euÉUblÉÉâ euÉUxÉÉiqrÉiuÉÉiÉç iÉxqÉÉiÉç
mÉârÉÉÍpÉUÉÍkÉiÉÈ|

euÉUÉlÉç EmÉcÉUâiÉç kÉÏqÉÉlÉç.....|| cÉUMü
xÉÇÌWâiÉÉ

Gruel prepared using monocots like rice, barley, sooji, etc and processed with *pippali*, *dashamoola*, ginger, rocksalt etc are helpful to maintain resistance and nutritional balance.

2. *Laaja peya* (Parched rice-khoi):

1 part of parched rice is boiled with 14 parts of water and reduced to half. The supernatant portion is added with medications like *dashamoola*, ginger and honey. This preparation helps in fever associated with cough, breathlessness and diarrhoea.

Peya prepared with pomegranate is also useful.

3. *Yoosha* :

rÉÔwÉÈ xqÉ×iÉÉâ uÉæSsÉÉlÉÉqÉ A¹ÉSzÉaÉÑhÉâ AqoÉÉÍxÉ |
rÉÔwÉÉâ oÉsÉrÉÉâ sÉbÉÑÈ mÉÉMâü ÂcrÉÈ
MühOûMüTüÉmÉWûÈ || rÉÉâaÉU¹ÉÉMüU

Yoosha is a preparation where 1 part of dicot preferably greengram or horsegram is cooked with 18 parts of water and reduced to 1/4th part and used. This preparation is easily digested, it improves taste perception and promotes strength as it is rich in protein.

qÉÑªÉlÉÉqÉÑ·ÉqÉÉâ rÉÔwÉÈ SĭmÉlÉÇ zÉİiÉsÉÉâ sÉbÉÑÈ |
uÉ×hÉÉâ FkuÉieÉŞÉÑÂaSÉW MüTüÌmÉ·É euÉUÉ´cÉÎeÉiÉÇ

||

SÉÌQûqÉÉqÉsÉMüÉprÉÈ iÉqÉÑªrÉÔwÉÈû xÉÑxÉÉkrÉiÉÉÈ

|| rÉÉâaÉU¹ÉÉMüU

In conditions where fever is associated with diarrhoea, *yoosha* medicated with *musta*(cyperus rotundus), *Chirayata*(swertia chirata), *Shunti*(zingerber officinalis), and *Guduchi*(tinaspora cordifolia) is useful.

When *yoosha* is prepared with greengram and is processed with pomegranate and gooseberry, it provides rich source of vit.c that acts as immunomodulator.

4. *Shadanga paneeya*:

qÉÑxiÉmÉmÉiOûMüÉâzÉİU cÉlSlÉÉâSĭcrÉlÉÉaÉUæÈ |
´É×iÉzÉİiÉÇ eÉsÉÇ S±ÉiÉÇ ÌmÉmÉÉxÉeuÉU zÉÉliÉrÉâ || cÉUMü
xÉÇİWûiÉÉ

It is a wonderful combination of 6 drugs all taken in equal quantity in coarse powder form. *Musta* (cyperus rotundus), *parpata* (Fumeria Indica), *usheera* (vetiveria zizanoides), *chandana* (centella album), *udeechya* (Andropogan vetiveria), *nagara* (zingeber officinale). 15 gms of this powder is put in ½ lt of boiling water and allowed to cool. It is later filtered and used. The patient is told to take sips of this preparation repeatedly. These drugs mainly have antipyretic effect and also reduce the associated symptoms of fever.

Immunomodulators (*Rasayana prayoga*):

Rasayana prayoga plays an important and vital role in breaking down the pathogenesis of the disease. When wisely adapted in early stages, it can prevent further worsening of the disease, accelerate the rate of healing and avoid recurrence. *Rasayana* can also be adapted to prevent occurrence of a disease in a healthy person. Some important *rasayana* are,

1. *Amruta* (*Tinaspora cordifolia*): its potent antiviral activity is proved in HSV-1. It has immune stimulating properties. *Samshamani vati*, *chinnaruha kashaya*, *Guduchi satwa*, *Amritarista*, *Amrutottara kashaya* are available preparations.

2. *Haridra* (*curcuma longa*): it has proved antiviral and anti-inflammatory properties, it also improves immunity. It gives excellent results in fever, coryza, eosinophilia, and other upper respiratory conditions. For preventive purpose, 2-3 gms of turmeric can be taken with warm milk and jaggery. It can be used with hot water for gargling.

3. *Pippali* (*piper longum*):

mÉërÉÉærÉ qÉkÉÑxÉÍqÉ´ÉÉ UxÉÉrÉlÉ aÉÑhÉæÌwÉhÉÉ |
eÉàiÉÑÇ MüÉxÉÇ æÉrÉÇ zÉÉåwÉÇ µÉÉxÉÇ ÌWûMçüMüÉÇ
aÉsÉÉqÉrÉÉlÉÇ ||

.....ÛuÉwÉqÉ euÉUÉIÉÇ |

uÉæxuÉrÉiÇ mÉÏIÉxÉÇ.....|| cÉUMü
xÉÇIWüiÉÉ

It contains piperine which is having significant anti inflammatory activity. Cough, common cold, throat irritation, fever are the main indications. It gives relief in these conditions besides reduces the weakness or fatigue caused due to disease. It is one of the best immune modulator especially in conditions relating to upper and lower respiratory conditions. *Amruta satwa 20gms+ choushasta prehari pippali 20gms+ brihat haridra kanda 100gms*. This preparation when taken 1tsp twice daily with lukewarm water provides excellent immunity in conditions of respiratory system. The above combination can be mixed with 5gms of *shataputi Abraka bhasma* and given with honey in conditions of lower respiratory tract specially in breathlessness.

4. Yastimadhu (glycyrrhiza glabra): it is a time tested and proven drug for its widespectrum action in respiratory disorders. One of its active ingredient Glycyrrhizin helps to prevent viral replication. Its decoction prevents viral proliferation in throat when used for gargling.

5. Tulsi (Ocimum sanctum): it is a commonly used drug for its excellent action in upper respiratory disorders. Its extract along with leaf extract of *Acacia Arabica* has shown anti viral properties.

6. Ardraka(Zingiber officinale): fresh ginger is effective against human respiratory syncytial virus in human respiratory tract induced plaque formation on airway epithelium by blocking viral attachment and internalization.

7. Kalamegha(Andrographis panniculata): it has a potent antiviral activity.

8. Bhumyamalaki (Phyllanthus niruri): its bioactivity role is presented by elevated levels of antibacterials and antioxidants and also has immune activation potentials.

Drinking hot water:

iÉ×whÉqÉsmÉÉsmÉqÉÑwhÉÉqoÉÑ ÌmÉoÉâ²ÉiÉMüTüeuÉUå |

ÍÉÍÉÇ MüTüÇ ÌuÉsÉrÉÇ ÍÉÉâiuÉÉ iÉ×whÉÉqÉÉzÉÑ ÌÉuÉiÉirÉâiÉÇ ||

It is always advisable to drink hot water in any stage of fever. It promotes digestion, removes fatigue, prevents proliferation of pathogens in mouth and throat, dehydration is also taken care besides it also increases bioavailability of administered medicines.

To summarize :

1. Maintain healthy social distancing as explained in *oupasargika roga*.
2. Drinking hot water.
3. Repeated sipping of *shadanga paneeya*.
4. Use of medicated gruel, *peya*, *yavagu*, *mudga yoosha* for nutritional supplementation and immune modulation
5. Immunomodulator / *rasayana prayoga* helps to build up resistance against the diseases and early recovery.
6. Gargling with *Triphala kashaya* or warm salt water with turmeric or licorice helps to prevent the proliferation of the viruses in mouth and throat, thus preventing their invasion to lower respiratory organs.
7. *Triphala kashaya* filtered through layers of cloth, is used to clean the eyes (*netra prakshalana*) which prevent the entry of viruses.
8. Instilling two drops of *Anu taila* in both the nostrils (*pratimarsha nasya*) keeps the nasal cavity and nasopharyngeal pathway clean thus preventing entry of pathogens.
9. *Satwajaya chikitsa*: by doing *pranayama*, *dhyana* (meditation) , *homa* etc. rituals, helps to build confidence amongst the people of the community and prepare them mentally to face the situation.

JWARA CHIKITSA :

In catarrhal stage- Initial 3 to 5 days

1. *Mahasudarshana khada* 20ml thrice daily or *Mahasudarshana Ghana vati* 1 tab every 6 hourly.
2. *Samshamana vati*- 2 tab thrice daily
3. *Tribhuvanakeerti rasa* -1 tab thrice daily.
4. In throat irritation /cough , *sitopaladi churna* 2.5gm + *guduchi satwa* 1gm + *brihatharidra khanda*7.5gm are mixed and given twice daily with honey.
Can be used in children with reduced dose.
5. In *vatakaphaja lakshanas*- *dashamoola katutrayee* 15 ml BID.
6. In *vatapittaja lakshanas*- *dashamoola vidaryadhi rasayana* 10gms BID.
with luke warm water. This preparation also helps to boost immunity and can be adapted for prevention of its onset.

In paediatric case:

- *Kumara kalyanaka rasa*- 65mg BID with honey.
- *Balachaturbhadra rasa* 60 to 125mg thrice with honey and
Mahasudarshana khada 5ml thrice daily.

Along with these the different nutritional supplements and drinks which have been discussed earlier needs to be adapted along with medications for disease.

In severe conditions when breathlessness starts:

1. *Shwasakasa chintamani rasa* 1-1-1 with honey
2. *Mrityunjaya rasa* 1-1-1
3. *Dashamoolarista* 3tsp thrice with water.

In case of pitta dominance, add *Kantakari gritha* 10ml twice (because in covid-19 *vatapitta jwara* laxanas are observed.)

In very severe conditions, *Jayamangala rasa* 1 tab twice with honey before food with *Vasantamalati rasa* 1 tid can be adapted. (In few critical conditions I personally adapted this with miraculous results).

Chikitsa Nasti Nisphalam

***PROTOCOL DEVELOPED BY
DR.SRINIVAS ODEYAR***

COVID -19- AN ANALYSIS BASED ON TRISUTRA

गुणत्रयविभेदन मुर्तित्रयमुपेयुषे ।
त्रयीभुवे त्रिनेत्राय त्रिलोकीपतयेनमः ॥ चक्रपाणिः

Dr ShrinivasVadeyar M.D.(RS & BK)
Physician – Maitri Ayurvedalaya
Prop- Pavaman Pharmaceuticals

Introduction

अपि तु खलु जनपदोद्ध्वंसनमेकेनैव व्याधिना

युगपदसमानप्रकृत्याहारदेहबलसात्म्यसत्त्ववयसां मनुष्याणां कस्माद्भवतीति॥५॥

Agnivesha asks Punervasu Atreya that how different individuals having different physical constitution, food habits, age and satmya may suffer from same disease. This is the context where the concept of epidemics and pandemics begins in Ayurveda. Atreya considers that such conditions are due to vitiated vayu and other factors and the diseases are known as Janapadodhwamsa vyadhis. An entire chapter named as “Janapadodhwamsiya Vimanam” has been dedicated to explain the causative factors and treatment of Janapadodhwamsa vyadhis.

Atreya who begins with term JANAPADODHWAMSA – destruction of a community or human settlements ends the chapter with DESHODHWAMSA- destruction of countries.

देशोद्ध्वंसनिमितीये विमाने मुनिसत्तमः॥५२॥

COVID -19 that has become pandemic today is clearly a Janapadodhwamsa vyadhi as mentioned in Ayurvedic texts.

भिन्नाहरवयः सत्म्यप्रकृतीनां समं भवेत् ।

एको विकृतवाय्वादियुगपत्सेवनाद्गदाः ॥ (अ.सं.९/७१)

Nidana

कदाचिदव्यापन्नेष्वपि ऋतुषु कृत्याभिशापरक्षःक्रोधाधर्मैरुपध्वस्यन्ते जनपदाः, विषौषधि
पुष्पगन्धेन वा वायुनोपनीतेनाक्रम्यते यो देशस्तत्र दोषप्रकृत्यविशेषेण कासश्वासवमथुप्र
तिश्यायशिरोरुग्ज्वरैरुपतप्यन्ते, ग्रहनक्षत्रचरितैर्वा, गृहदारशयनासनयानवाहनमणिरत्नोप
करणगर्हितलक्षणनिमित्तप्रादुर्भावैर्वा ||१९||

सु.सू. ६/१९ <http://niimh.nic.in/ebooks/esushruta/?mod=read>

Sometimes a town or a city is depopulated by –

Kritya , abhichara, raksha krodha are different forms of ill deeds or wrong deeds that are performed by individuals or persons with view of causing bad or disease to another person or a group of people .Krityas refers to something created artificially.

Sometimes the pollens of poisonous flowers or grasses, etc., wafted by the winds, invade a town or a village.

The above two causes develop a sort of epidemic Kasa(cough),Shwas(asthma), Vamathu(Vomiting), Pratishyay(cough or cold), Shiroruk (Headache) orJwar(fever).

‘कासश्वासप्रतिश्यायगन्धाज्ञानभ्रमशिरोरुग्ज्वरमसूरिकादिभिरुपतप्यन्ते’ इति, व्याख्यान

यन्ति च-

तत्र नासारन्धानुगतेन वायुना कासश्वासप्रतिश्यायगन्धाज्ञानभ्रमशिरोरुजः, त्वगिन्द्रियग

तेन ज्वरमसूरिकादयः।

सु.सू.

६/१९

<http://niimh.nic.in/ebooks/esushruta/?mod=read>

Dalhana adds Gandhajnana(decreased or loss of smell) and masurika(twak vikara) . He further divides it as-

1. Those which spread by air (droplet type infection) through nose are kasa, shwas, pratishyaya, gandhajnana ,bhrama and shiroruja.
2. Those spread by twagindriya are jwara and masurika.(Fomite Transmission).

The spread of COVID-19 virus by droplet mode and fomite transmission (from contaminated surfaces) and role of air in spread of droplets has been clearly explained..

The diseases that spread from person to person are Aupasargika Vyadhis. They fall under Daivabalapravritta vyadhia as explained by Sushruta along with the Bhanumati commentary of Chakrapani gives a very scientific explanation of the same as follows.

The Daiva-bala-pravritta type includes diseases that are the results of displeasure leading to wrath of Deva gana(the natural forces in environment that protect nature and us) This type may be divided into two sub divisions as the diseases that assumes a contagious character (epidemic), or is purely accidental, and restricts itself to isolated cases (sporadic). कालबलप्रवृत्ता ये शीतोष्णवातवर्षातपप्रभृतिनिमित्ताः; तेऽपि द्विविधाः-

व्यापन्नर्तुकृताः, अव्यापन्नर्तुकृताश्च [१] |

दैवबलप्रवृत्ता ये देवद्रोहादभिशप्तका [३] अथर्वणकृता उपसर्गजाश्च; तेऽपि द्विविधाः-

विद्युदशनिकृताः, पिशाचादिकृताश्च; पुनश्च द्विविधाःसंसर्गजा [३] , आकस्मिकाश्च |

सु.सू.२४/७<http://niimh.nic.in/ebooks/esushruta/?mod=read>

दैवबलप्रवृत्ता इति देवशक्तिजाता इत्यर्थः। के पुनस्त इत्याह-

ये देवद्रोहादित्यादि। देवगोगुरुसिद्धानां द्रोहात्। अभिशप्तका इति ऋषीणामाक्रोशजाः। आ
थर्वणकृता अथर्ववेदप्रणीताभिचारिकमन्त्रैः कृता मारणात्मका व्याधयः। उपसर्गजा इति उ
पसृज्यन्त इत्युपसर्गाः पीडितजनसमीपोत्पन्ना ज्वरादयः। विद्युदशनिकृता इति लताका
रा तिर्यक्पतन्ती वह्निरूपा विद्युत्, मुशलवदधःपतनशीलो मारणात्मकोऽशनिः। संसर्गजा
इति देवादिद्रोहकजनसम्पर्कजा इत्यर्थः। आकस्मिका इति विनैव संसर्गं प्राक्तनकर्मपीडि
तत्वेन जाता इत्यर्थः। उपसर्गजसंसर्गजयोरयं विशेषः-

उपसर्गजा ज्वरादिरोगपीडितजनसम्पर्काद्भवन्ति; संसर्गजाश्च देवादिद्रोहकजनसम्पर्का
द्भवन्ति। 'देवद्रोहाभिशप्तका' इत्यत्र केचित् 'उपसर्गाभिशापाभिचाराभिषङ्गजा' इति पठ
न्ति, स चाभावान्न लिखितः। <http://niimh.nic.in/ebooks/esushruta/?mod=read>

रक्षोगणादिभिर्वा विधै भूतसङ्घै स्तमधर्ममन्यद्वाऽप्य पचारान्तरम
उपलभ्याभिहन्यन्ते॥२२॥

According to chakrapani it is due to **Rakshogana** that the diseases assume the form of **Aupasargikatva** – contagious nature could destroy individuals or communities immediately or at a pre-determined time. **Dalhana** clearly states that **upasargaja rogas** are due to spread from an infected person to another while **Samsargaja** are more potential in spreading from person to person.

Different modes of spread

प्रसङ्गाद्गात्र संस्पर्शात् निश्वासात् सह भोजनत् ।

एकशय्यासनाच्चैव वस्त्रमाल्यानुलेपनत् ।

कुष्ठंज्वरश्च शोषश्च नेत्राभिष्यंद एव च।

औपसर्गिकरोगाश्च संक्रामन्ति नरान्नरम्॥ सु.नि. ५/३३-३४

Aupasargika rogas spread through sexual intercourse or by touch or breath, or through partaking of the same bed, and eating and drinking out of the same vessel with infected person , or through using the wearing apparel, unguents and garlands of flowers previously used by a person afflicted with an infective disease.

संभवः पुनरेतेषां कर्मणः सामुदायिकात् ।(अ.सं.९/७३)

Janapadodhwamsa vikaras are consequences of sin committed by a whole community.

ऋतुव्यापद्भ्योऽन्यैरपि हेतुभिव्याधिसम्भवं दर्शयन्नाह-

कदाचिदित्यादि। कदाचिन्न सर्वकालम्। कृत्या कुपितमन्त्रिणोऽभिचारकर्मजनितो राक्षसी

विशेषः, अन्ये तु सर्वराष्ट्रच्छेद्यभिचारः, अभिचारस्त्वेकपुरुषव्यापादक एव; अभिशापो गु

रुसिद्धादीनामाक्रोशः; रक्षांसि हिंसाविहाराणि हेतिप्रहेतिकुलजातानि, तेषां क्रोधो रक्षःक्रोधः

; अधर्मः कायवाङ्मनसां दुश्चरितम्। उपध्वस्यन्ते उपदूयन्ते। जनपदा लोकाः। विषौषधिपु

ष्पगन्धनेत्यादि ^[३]। विषाणामोषधीनां च यानि पुष्पाणि तेषां गन्धेन। किंविशिष्टेन? वायु

नोपनीतेन वायुना समीपमानीतेन; तेन ये श्वासकासादयस्तैरुपतप्यन्ते जनपदाः। ओषध

यः सुविलिन्दवृक्षादयः। अन्ये तु कासश्वासेत्यादिपाठमन्यथा पठन्ति-

‘कासश्वासप्रतिश्यायगन्धाज्ञानभ्रमशिरोरुग्ज्वरमसूरिकादिभिरुपतप्यन्ते’ इति, व्याख्या

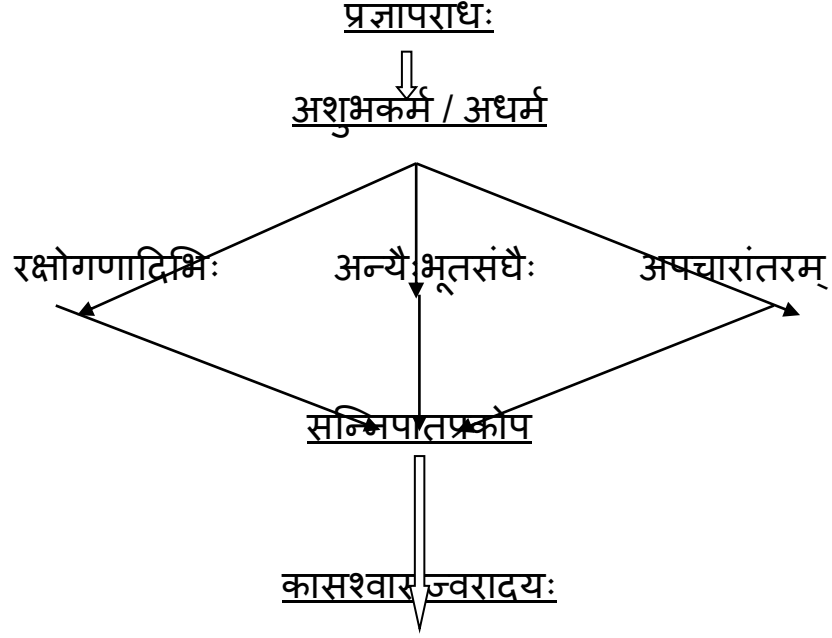
नयन्ति च-

तत्र नासारन्धानुगतेन वायुना कासश्वासप्रतिश्यायगन्धाज्ञानभ्रमशिरोरुजः, त्वगिन्द्रियगतेन ज्वरमसूरिकादयः। ग्रहनक्षत्रचरितैर्वेति ग्रहाणां शनैश्चरादीनां गर्हितस्थानस्थितानां प्रचारो ग्रहचरितं; नक्षत्राणि अश्विन्यादीनि, तेषां चरितमुल्कापातादिभिर्जन्मनक्षत्राभिहननम्। गृहदारेत्यादि गृहादीनां यानि गर्हितानि निन्दितानि लक्षणानि चिह्नानि तन्निमित्तं प्रादुर्भाव उत्पत्तिर्येषां व्याधीनां तैर्वा उपतप्यन्ते जनपदाः, दारा भार्याः, शयनं खट्वा, आसनं पीठं, यानं दोलारथादि, वाहनं हस्त्यश्वादि, मणिः स्फटिकादिः; गृहादयो मणिपर्यन्तास्त एव रत्नानीति समासः, अन्यथा मणिरत्नयोरेकार्थत्वात् पुनरुक्तता स्यात्; अन्ये तु मणयः सर्पादीनां प्रशस्तावयवविशेषाः, रत्नानि माणिक्यादीनि, उपकरणानि घटपिठरशूर्पादीनि; अथवा गृहादीन्येवोपकरणानि। अन्ये तु गृहदारेत्यादिगद्ये गृहदारशब्दौ निमित्तशब्दं च परित्यज्य 'शयनासनयानवाहनमणिरत्नोपकरणगर्हितलक्षणप्रादुर्भावैर्वा' इति पठन्ति॥

१९॥ <http://niimh.nic.in/ebooks/esushruta/?mod=read>

सर्वेषां ^[१] च व्याधीनां वातपित्तश्लेष्माण एव मूलं ।

The deranged bodily humours such as, Vayu, Pitta and Kapha should be looked upon as the primary sources of all diseases.



AUSHADHA

तत्र, स्थानपरित्यागशान्तिकर्मप्रायश्चित्तमङ्गलजपहोमोपहारेज्याञ्जलिनिमस्कारतपोनि

यम- दयादानदीक्षाभ्युपगमदेवताब्राह्मणगुरुपरैर्भवितव्यम्, एवं साधु भवति ॥२०॥

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ऋतुकोपस्याधर्मकारित्वात्तत्र दैवव्यपाश्रयं भेषजम्]

Adharma karma (sinful act) committed during an individual's present life and the previous life, is responsible for the vitiation of these factors. Intellectual errors (*prajnaparadha*) is the cause for both these types of sins (i.e., sins in the present life as well as in the past).

1. स्थानपरित्यागः - परित्यागो व्यापन्नानां ओषधीनां गृहादीनां च।(चक्रः)

परित्यागो व्यापन्नानां ओषधीनां गृहादीनां च।

Chakrapani explains it as avoiding (rejecting) contact with व्यापन्न – contaminated or infected. (to be adopted at primary level)

Dalhana advises migration to a healthy or unaffected locality. (to be adopted at secondary level)

2. शान्तिकर्म- शान्तिरिन्द्रियविजयः, अथवा वेदोक्तमन्त्रैर्यजनादिकं;

Control or Pacification of the senses. Averting of pain(discomfort) due to prevailing situation.

3. प्रायश्चित्तं-

प्रायश्चित्तं प्राक्तनकर्मोपशमार्थं स्मार्तवचनेन चान्द्रायणादि, अथवा “प्रायो नाम

तपः प्रोक्तं चित्तं निश्चय उच्यते। तपोनिश्चयसंयुक्तं प्रायश्चित्तमिति स्मृतम्

”-

sorrow or regret for having done/ committed something wrong/sin.

4. मंगल - मङ्गलं प्रशस्तौषधमणिधारणादि;

Contact with happy or auspicious or blissful things.

5. होम- होमो लक्षकोटिप्रयुतोपलक्षितः;

The act of making oblation to DEVAS.

6. जप - जप ओङ्कारपूर्वकमृग्यजुःसामावर्तनं;

Reciting Rik and Yajur and samaveda preceded by OM kara.

7. उपहार-

उपहारः देवादिषु गवाश्वप्रभृतीनामुपा(न)यनम्, अन्ये उपहारो देवतानां सपशुर्बलिः;

Offered to God with worship and devotion.

8. इज्या - इज्या यागः;

Ceremony in which

9. अञ्जलि- अञ्जलिः भक्त्या करसम्पुटविधानं;

Open hands placed side by side and slightly hollowed , a method of prayer for Divine blessing / expresses deep respect.

10. नमस्कार - नमस्कारो देवद्विजगुरुभ्यः कायवाङ्मानसः प्रणामः

a method of greeting or gesture of respect to elders, God or preceptors, made by bringing the palms together before the face or chest and bowing.

11. तपो -; तपः तापनालक्षणमुपवासादि;

Upavasa - fasting as per rules of upavasa. It includes practices especially meditation and self-discipline

12. नियम -नियमः शास्त्रोदितो विधिर्मौनादिः,

Remaining Mauna (silent, silence of mind)

13. दया -दया प्राणिषु कृपा;

sympathy or compassion to creatures around us.

14. दान- दानं यथाविभवं वित्तविसर्गः;

charity

15. दीक्षा- दीक्षा गुरुतो मन्त्रादिग्रहणं;

Derire to give or initiation to the path of

Truth. Generally done by a Guru who tells a unique Mantra to his disciple.

16. अभ्युपगम - अभ्युपगमः गुरुवाक्यादीनामङ्गीकारः;

Acceptance of True words spoken by the authoritative.

17. देवताब्राह्मणगुरुपरैर्भवितव्यम् - respect and follow the authoritative.

परशब्दः स्थानपरित्यागादिभिः [१] प्रत्येकं सम्बध्यते।

एवं साधु भवति एवं कुशलं भवतीत्यर्थः -

Above mentioned are the ways by which a Aupasargika roga is to be approached by healthy as well as the diseased. The methods mentioned here come under Daivavyapashraya Chikitsa and

एतच्च दैवव्यापाश्रयमेव प्रायश्चिकित्सितमुक्थं यथोक्तव्यापदां अधर्मेणैव प्राय
उत्पादादिति ज्ञेयम् ।(चक्रः)

We must also remember that in the sequence of three types of Chikitsa Charaka has mentioned Daivavyapashraya Chikitsa first , the reason as per Chakrapani being its immediate efficacy/action.

अत्र दैवव्यापाश्रयं आदावुक्थं आशुव्याधिहरत्वेन । चक्रपाणिः च, सू.११/५४

Use of DHOOPANA

वेदनारक्षोहननमेव धूपप्रयोजनं मुख्यं । माक्षिकादिप्रतिषेधादि च गौणं प्रयोजनम् ।

The use of DHOOPA is for control of VEDANA and protection from RAKSHO GANA.(Role of raksho gana in JANAPADODHWAMSA vyadhi discussed earlier).

Sushruta mentions powders of Guggulu ,Agaru ,Sarjarasa, , Gaura sarshapa(white mustard) mixed with Lavana and Nimba patra(Neem leaves) and Ajya(Ghrita) to be used for DHOOPANA.(Su.Sutra.5/18)

Atreya opines that those afflicted with janapadodhwamsa vyadhis could be treated with Panchakarma procedures and administration of *rasayana* measures (rejuvenative procedures) with previously collected drugs, along with *sadvritta* (observance of noble conducts) etc Truthfulness , compassion for creatures, charity, sacrifices, worship of gods, the

observance of right conduct, tranquility , prophylactic protection of oneself, and seeking ones own good, residing in a wholesome country, the keeping of continence , consulting scriptures and the great self restrained sages, constant association with the righteous, the well dispositioned and those who are approved by the elders- all this with a view to preserving life, has been indicated as medicine to those who are not destined to die in the terrible times.

SPECIFIC TREATMENT METHODS

Before going to specific treatment let us consider the following data from WHO website.

The COVID-19 virus affects different people in different ways. COVID-19 is a respiratory disease and most infected people will develop mild to moderate symptoms and recover without requiring special treatment. People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe disease and death.

Common symptoms include:

- ***fever***
- ***tiredness***
- ***dry cough.***

Other symptoms include:

- ***shortness of breath***
- ***aches and pains***
- ***sore throat***
- ***and very few people will report diarrhoea, nausea or a runny nose.***

Ref - https://www.who.int/health-topics/coronavirus#tab=tab_3

Treatment as per Ayurveda has been proposed by considering the symptoms as in WHO site.

Treatable patients have been divided into two groups.

Group A- Fever with or followed by cough and shortness of breath.

Group B – Cough and Shortness of breath without fever .

Other symptoms have been dealt at proper instances.

Treatment of Group A- Fever with or followed by shortness of breath.

The concept of AMA is critical in treatment of JWARA and as long as AMA is there one cannot administer any AUSHADHA. Even administering of PANEEYA is contraindicated till one gets TRISHNA.

The treatment can be summarized as

LANGHANA- UPAVASA

wait for trishna– Administer MUSTA –NAGARA PANEEYA

wait for kshudha- Administer- Mudga yusha

Observe for – mala pravritti, laghutva. Sveda pravritti.

TREATMENT BEGINS WITH DONTS

सौषधं च क्रियाक्रममित्यनेन = यद्यप्यौषधमादावुक्तं, तथाऽपि तस्य

क्रियाक्रमविशेषणतया अप्राधान्यमिति कृत्वा औषधमतिक्रम्य नवज्वरे इत्यादिना

क्रियाक्रमं ब्रूते। क्रियायाश्चिकित्सायाः क्रमः परिपाटी। तत्राप्यहितस्यैव प्रथमं निषेधः।

What is to be avoided?

नवज्वरे दिवास्वप्नस्नानाभ्यङ्गान्नमैथुनम्॥१३८॥

क्रोधप्रवातव्यायामान् कषायांश्च विवर्जयेत्।

Patients should advised to avoid eating anything on onset of fever especially tea , bath , bread , biscuits and KASHAYA.

(Note –Paneeeya is not contraindicated.)

USHNA JALA in conditions involving VATA and KAPHA or TIKTA siddha jala or Shadangapaneeya in PITTA vriddhi. Both are deepana, pachana, Srotoshodhaka, JWARAGHNA(Vyadhi vipareeta) Balya(gives BALA ,strength), develops RUCHI, causes sweating and is SHIVAM(hence very much indicated in AUPASARGIKA) .

तृष्यते सलिलं चोष्णं दद्याद्वातकफज्वरे ॥ १४३ ॥

मद्योत्थे पैतिके चाथ शीतलं तिक्तकैः शृतम्।

दीपनं पाचनं चैव ज्वरघ्नमुभयं हि तत् ॥ १४४ ॥

स्रोतसां शोधनं बल्यं रुचिस्वेदकरं शिवम्।

Svedana which is the second line of treatment has an important role in SHWAS.

सोर्दपीनसश्वासे जंघापर्वास्थिशूलिनि।

वातश्लेष्मात्मके स्वेद प्रशस्तः, ...(अ.ह.चि.१/१९)

We are using PHALAKA sveda in JWAR-SHWAS .

The YAVAGU PANA in jwara has its own significance in JWAR-SHWAS.

ह्रस्वेनपचंचमूलेन हिक्करुक्श्वासकासवान् ।(अ.ह.चि.१/२९)

Yavagu prepared from Hrisva Pancamula is Jwarahara, Hikka-shwas-kasa hara.

ROLE OF DAIVAVYAPASHRAYA

Daivavyapashraya is the first line of treatment as discussed earlier.

Charaka mentions different forms of it . It may be reciting of VISHNUSAHASRA NAMA or and the most simplest form being

विष्णुं सहस्रमूर्धानं चराचरपतिं विभुम् ।

स्तुवन्नामसहस्रेण ज्वरान्सर्वानपोहति ॥(च.चि.३/३११)

भक्त्या मातुः पितृश्चैव गुरुणां पूजनेन च ॥

ब्रह्मचर्येण तपसा सत्येन नियमेन च ॥

जपहोमप्रदानेन वेदानां श्रवणेन च ।

ज्वराद्विमुच्यते शीघ्रं(च.चि.३/३१३-३१५)

The principle of JWARA can be easily put in as-

ज्वरादौ लंघनं पथ्यं ज्वरमध्ये तु पाचनम्।

ज्वरन्ते रेचनं तद्धिमूलादुन्मूलयेन्मलान् ॥

Begin with LANGHANA, the do PACHANA and finally give RECHANA.

IMPORTANT YOGAS IN DIFFERENT TEXTS

Yogas which are mentioned in texts and find application in present condition or which are ANUBHUTA and which can be easily prepared have been documented here.

1. Vagbhata considers MUSTA-PARPATAKAM as the AGRYA – most effective among all jwarahara dravyas.
2. YOGAS FROM RASATANTRASARA SIDDHA PRAYOGA SAMGRAHA.Part-1, Krishna Gopal Ayurveda Bhavan Kaleda, 15th Edition , 2001.
 - A. Achintyashakti Rasa(Kharaliya rasayana-page number-588). Ancient vaidyas of jaipur tradition found it to be very effective in SHWASANAKA SANNIPATA(Pneunomia). Details in attachment File name achintya.
 - B. Sameera Pannaga Rasa(Kupipakva rasayana-page number-273-278).
Rasayana and effective in SHWASANAKA SANNIPATA(Pneunomia). Details in attachment File name spannaga.
 - C. A list of drugsin shwasanaka Jwara with page numbers and respective details from above said book .(Details in attachment File name others shwas1 and 2).
 - D. A list of drugsin shuska kasa with page numbers and respective details from above said book .(Details in attachment File name- All kasa).

DISCUSSION AND CONCLUSION.

The basis of analysis of covid 19 is based on

- 1.** Aupasargikatva – its causes and mode., different types of transmission, potential and normal spreaders.
- 2.** Among the tri fold treatment – Daiva , Yukti and Satvavajaya, Yuktivyapashraya has econd place and an elaborate methods of Daivavyapashraya has been discussed in detail.
- 3.** ***There is close resemblance in the lakshanas of Janapadodhwamsa vikaras mentioned by Sushruta.***
- 4.** Treatment wil be successful only if preceded by Daivavyapashraya chikitsa because of Prjnaparadha being Samavayi karana of ***Janapadodhwamsa karana*** and hence Sushruta and Charaka have included as the primary line of treatment in the ***Janapadodhwamsa vikaras .***

***PROTOCOL DEVELOPED BY
DR.SARBESWAR KAR***

*Ayurvedic Preventive
and Curative Protocol
for Covid-19
A Proposal*

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INDEX

1. *Introduction*
2. *Ayurvedic Perspective*
3. *Clinical Staging- Hetu and Linga Sutra*
4. *Drug Review- Aushadha Sutra*
5. *Preventive Protocol*
6. *Stage wise treatment Protocol*
7. *Guidelines in using Protocol*
8. *Reference and Bibliography*
9. *Acknowledgements*

COVID-19

COVID -19 is an illness caused due to Novel Corona Virus 2, now called as Severe Acute Respiratory Syndrome Corona Virus -2 (SARS CoV 2). It was first reported from Wuhan City, China on 31st of December 2019. It was declared as a pandemic by WHO on March 11, 2020, as it has confirmed its presence in all continents except Antarctica [1].

Ayurvedic Perspective of Covid-19

Ayurveda has unique methods of approaching a newly detected disease. Ayurveda embraces a three pointed approach in the elaboration of an unknown disease- the natural history of the disease (Vikaara prakrti), the site of the pathological process (adhishthana) and etiological features (samuthaana vishesha). The detail explanation of the disease can be outlined on the lines of *Trisutra Ayurveda*. [2]

• Hetu Sutra

Considering Covid-19 has evolved itself into a pandemic, affecting a large population irrespective of their physical features, dietary patterns, psychological attributes etc., Ayurveda considers it as a Janapada-udhwamsa vikara[3]. It can be grouped under the class of aagantuja vikaara with special reference to the class of Bhuutabhishangaja (microbiological etiology) [4] This pathological condition also can be attributed to *Aupasargika* and *sankramika disease*[5]

Furthermore, *Bhuta* in Ayurveda also has the meaning of *Visha*. Here, the origin of the virus was earlier considered from animals (Bats – primary hosts, Snake- intermediate host and further Pangolins). According to Acharya Sushruta, all share the similar Yoni [6]

Thus, the origin of the pathogen can be linked to Jangama Visha. According to Agada tantra (Toxicology and forensic medicine branch of Ayurveda) principles and practices, Stavara visha (poison of herbal and mineral origin) is an antidote to jangama visha (animal poison) and vice versa. Here virus can be categorized under animal poison which poses threat to the human being. Ayurveda formulations containing Vathsanabha, Dattura, Bhallataka, Vishamusti, Haritala, Gauripashana etc., are purified (against Visha effects) and advised with very minimal dose along with antidote to treat many acute to chronic illnesses caused by microbes. These herbo-mineral agents show potent antimicrobial activity (antiviral, antibacterial) which can be used as prophylactic as well as curative measure.

• Linga Sutra

Signs and Symptoms of COVID-19

Identification of the suitable pathological model along with the associated features is important. While referring to the details available from the places where the Covid-19 has affected maximum, and especially from China, almost 40% of the cases were very mild with no symptoms of viral pneumonia, another 40% of the cases were having moderate symptoms with mild pneumonia, 15% were having very severe symptoms and 5% were critical, at presentation. Generally 98% patients were having mild to moderate fever (*hwaram*), 76% were having cough (*kaasam*) and 44% were having myalgia (*anga mardam*) and fatigue (*tandra*).

Among those developed pneumonia, 99% were having fever (*hwaram*), 70% were having fatigue (*tandra*), 59% dry cough (*vaatika kaasam*), 40% having anorexia (*aruci*), 35% having myalgia (*anga mardam*), 31% having dyspnoea (*s'waasam*) and 27% were having sputum production (*kaphaja kaasam*)^[7].

In another report, the main clinical features are fever (*hwaram*), cough (*kaasam*), shortness of breath (*Shwaasa*). If the situation aggravated, there will be labored breathing (*Shrama Shwasa*), persistent pain or pressure in the chest (*uro vedana*), mental confusion (*moham*), inability to arouse (*samja naasham*), cyanosis (*aasya shyavata*)^[8] diarrhoea (*atisaaram*) and nausea (**Chardi**) are very minimal during the initial presentation

Many patients reported with fever, dry cough and minimal respiratory distress. Later the fever subsided, but the respiratory distress became severe and many died.

Considering all these factors, Covid-19 illness can be considered as a *Sannipata jwara* with predominance of *Kapha* and *Pitta*. Meanwhile the signs and symptoms seen in this condition are quite similar to the *Jangama Visha Lakshana* of *Kita visha* originating from yoni of *Jatuka* (Bat), *Sarpa* (Snake), *Shallaka* (pangolin)^[9].

The lakshanas of *Tikshna Kita Visha- Jwara, Angamarda, Murcha, Chardi, Atisara, Trishna, Daha, Murcha, Jhrumbha, Vepathu, Shwasa, Hikka, Daha, Atishita, Shopha* etc.,^[10]

Considering the above facts, we can draw a conclusion or can be hypothetically said that the cause of the disease is *Jangama Visha* producing the pathology of *Bhutabhisanga Sannipata Jwara*.

Samprapti Ghataka

<i>Dosha</i>	- <i>Kapha- Vaata - Pitta</i>
<i>Duhsya</i>	- <i>Rasa and Other Dhatus in the later stages</i>
<i>Vyadhi Swabhava</i>	- <i>Ashukari</i>
<i>Srotas</i>	- <i>Pranavaha and other Srotas</i>
<i>Sroto Dushti Prakara</i>	- <i>Vimarga Gamana, Sanga</i>
<i>Agni</i>	- <i>Vishamagni</i>
<i>Adhishthana</i>	- <i>Pranavaha Srotas and later Sarva Shareera</i>
<i>Vikara Prakruti</i>	- <i>Daaruna</i>
<i>Sadhyaasadhyata</i>	- <i>Sadhya in stages of Sanchaya and prakopa and</i> <ul style="list-style-type: none">• <i>Krichra Sadhya in stages of Prasara and Sthana Samshraya</i>• <i>Pranopaghataka in the stage of Bheda especially in the cases of elderly persons with existing co-morbid factors and alpa Rogi Bala.</i>

Samprapti and Clinical Stages

Bhutabhishanga (Jangama Visha)

(Portal Entry- Oro pharynx, Naso-Pharynx)



Stage 1-

Sanchaya and Prakopa Avastha

*Tridosha involvement in Pranavaha Srotos -
(Naso-pharynx, Paranasal Sinuses), Upper Respiratory Tract
[with Marked Symptoms like Sneezing, Cough, Fever, Malaise]*



Stage 2-

Prasara and Sthanasamshraya Avastha

*(All the Doshas affect the Entire Pranavaha Srotas)
[Manifestation of Fever, onset of cough and with aggravated symptoms]*



Stage 3-

Vyakta Avastha

*in Pranavaha Srotas and later Sarvasharira
(Jwara, Kasa, Angamarda, Tandra lakshana,
Dhatu paaka, Dhatugata Jwara Lakshana etc.)*



Stage 4-

Bheda Avastha

*All the Doshas affecting Sarva Shareera
(Upadrava Laskshanas- Shwasa, Moha, Sanja naasha, atisaara)*

*As the disease is *Agantuja*, the pathogenesis may not involve the progression as seen in a *Nija Vyadhi*.

Clinical Stages

Stage 1- Patients having travel history with Marked Symptoms like Sneezing, Cough, Fever, Malaise- *Kahapa- vata Sannipata Jwara*

Stage 2- Aggravated symptoms

Stage 3- *Dhatupaaka lakshana* and *Dhatu gata Jwara lakshana*

Stage 4- *Upadrava* like *Shwasa-* Acute respiratory syndrome

• Aushadha Sutra

As discussed earlier from the view point of Ayurveda, COVID-19 is read under the concept and magnitude of *Janapadodhwamsa*, *Aupasargika Roga*) and *Sankramika Roga*^[1]. The concept falls into all the three types of disease causation namely – *Aadi Daivika*, *Adibhoutika* and *Adhyatmika*. Accordingly, owing to its origin, both curative and preventive measures necessarily includes all the three principles of Treatment protocols- i.e *Daiwavapashraya*, *Satvavajaya* and *Yukti Vyapashraya* in totality.

Sequential analysis of Genomes, can give us plethora of information which can be of use for drug development as single or compound preparations in the line of anti-viral drugs (*bhutabhishanga*). Amongst other factors, sequence of the host invasion factors of the virus strain may possibly play an important role in the degree of transmission, virulence and pathogenicity of the virus.

The pathology of the disease is (*Bhutabhishanga janya- Jangama Visha*) fast progressive, affecting the *uttarottara dhatu* and *Ojus* posing a great threat to vital organs, the principles of treatment should be in line of multi-dimensional approach.

Hence, The choice of medicine (single and compoundpoly-herbo-mineral preparations) should be *Kapha pitta hara*, *-tridosahara*, *rakta prasadaka*, *Agada(Vishahara)*, *Jwara hara*, *Ashukaari* ,*Bahukalpa Rasayana/ Urjaskara* (drugs having immune-boosting properties).

Potent drugs possessing the above qualities are enlisted and analyzed as follows:

• DRUG REVIEW

I. ANALYSIS OF VISHAGHNA DASHEMANI FROM CHARAKA SAMHITA [1213]

S. N.	Drug (Sanskrit Name)	Latin Name	Family	Rasa	Guna	Viry a	Vi-paka	Chief Chemical Constituents ^[3]	Dosh-ghnta
1.	<i>Haridra</i>	Curcuma Longa Linn.	Zingiberaceae	Tikta, Katu	Laghu, Ruksha	Ushna	Katu	Curcumin $C_{12}H_{20}O_6$	KP
2.	<i>Manjishtha</i>	Rubia Cordifolia Linn.	Rubiaceae	Tikta, Kashya, Madhura	Guru, Ruksha	Ushna	Katu	Purpurin Manjistin Garancin	KP
3.	<i>Subaha</i>	Adiantum Lunulatum Burm.	Polypodiaceae	Kashaya, Tikta	Guru, Sheetala, Ruksha	Sheeta	Madhura	Adiantone, Adiantoxide Filicenol	KP
4.	<i>Sukshma Ela</i>	Elleteria Cardiomomum Maton.	Zingiberaceae	Madhur, Katu	Laghu, Ruksha	Sheeta	Madhura	Cineol Terpineole Sabinene Terpinene	VPK
5.	<i>Palindi</i>	Operculina Turpethum	Convulvulaceae	Tikta, Katu	Laghu, Ruksha,	Ushna	Katu	Turpethenic Acid, Coumerin Derivative Scopoletin	KP

6.	<i>Chandan</i>	Santalum	San-	Tikta	Laghu	Sheeta	Katu	Alpha And Beta Santa-	KP
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		Album Linn.	<i>talaceae</i>	<i>Madhura</i>	<i>u</i> <i>Ruk-</i> <i>sha</i>	<i>eta</i>		lol	
7.	<i>Katak</i>	Strychnos Pottorum Linn.	<i>Loganiaceae</i>	<i>Madhura, Kashaya, Tikta</i>	<i>Laghu, Vishada Vikashi</i>	<i>Sheeta</i>	<i>Madhura</i>	Brucine, Laganin, Mannose, Linoleic Acid, Saponins Like Sitosterol	KV
8.	<i>Shirisha</i>	Albizia Lebeck (L.) Benth.	<i>Leguminosae</i>	<i>Madhura, Kashaya, Tikta</i>	<i>Laghu, Ruksha, Tikshna</i>	<i>Ishd Ushna</i>	<i>Katu</i>	N-Benzoyl L Phenyl Alanilol, Macrocyclic Alkaloids, Flavonols, Saponins	VPK
9.	<i>Sindhavaar/</i> <i>*Subaha</i>	Vitex Nirgundo Syn. Vitex Trifolia Linn.	<i>Verbenaceae</i>	<i>Tikta, Katu</i>	<i>Laghu, Ruksha</i>	<i>Ushna</i>	<i>Katu</i>	Chrysophenol D, Casticin, Sabinene, Terpinen-4-Ol, Globulol	KV
10	<i>Shleshmataka</i>	Cordia Dichotoma Forst.F.	<i>Boraginaceae</i>	<i>Kashaya, Tikta, Madhura</i>	<i>Snigdha, Gurupichhil</i>	<i>Sheeta</i>	<i>Katu</i>	Pyrrolizidine Alkaloids, Betulin, Flavonoids, Coumarins, Terpenes, Saponins	VP

II. ANALYSIS OF OTHER POTENT DRUGS FROM DIFFERENT CLASSICS

S No.	Name	Latin name	Doshagnata	Prabhaava
1	Haridra	<i>Curcuma longa</i>	Kapha Pittahara	Pramehaghna, Krimighna , Varnya
2	Duraalabhaa	<i>Alhagi camelorum</i>	Kapha -pitta hara	Kapha roga hara
3.	Tulasi	<i>Ocimum sanctum</i>	Kapha -vata hara	Vishama jwara hara, Shwaasa-Kasaghna, bhutaghni
4.	Amruta	<i>Tinospora cordifolia</i>	Tridosahara	Rasayana, Jwaraghna , Vataraktahara
5.	Vidanga	<i>Embelia ribes</i>	Kapha -vata hara	Krimighna
6.	Saariva	<i>Hemidesmus indicus</i>	Tridosahara	Jwaraghna , Agnimandhyahara
7.	Yashtimadhu	<i>Glycyrrhiza glabra</i>	Pitta vata hara	Kanthya, Chakshyshya, Varnya, Keshya, Rasayana
8.	Shirisha	<i>Albizia lebbek</i>	Tridosahara	Vishaghna
9.	Vasa	<i>Adhatoda vasica</i>	Kapha pitta hara	Rakta pitta hara Shwasa hara
10.	Amalaki	<i>Emblica officinalis</i>	Tridosahara	Rasayana, pramehaghna
11.	Katuki	<i>Picrorhiza kurroa</i>	Kapha pitta hara	Jwarahara , Yakrit Uttejaka
12.	Kirata tikta	<i>Swertia chirata</i>	Kapha pittahara	Sannipatajwara hara
13.	Vatsanaabha	<i>Aconitum ferox</i>	Tridosahara	Jwarahara, Rasayana
14.	Dhattura	<i>Datura metel</i>	Kapha vata hara	Shwasahara Jwarahara, Vishaghna
15.	Nimba	<i>Azadirachta indica</i>	Kapha pitta hara	Kriimihara , Kushtaghna
16.	Bhumyamalaki	<i>Phyllanthus niruri</i>	Kapha pitta hara	Kasa , kandu hara, yakrit uttejaka
17.	Aparaajitaa	<i>Clitoria ternatea</i>	Tridosahara	Medhya
18.	Lavanga	<i>Syzygium aromaticum</i>	Kapha pitta hara	Dipana, Paachana, Chardighna, Shwaasahara
19.	Naagavalli	<i>Piper betle</i>	Kapha vata hara	Shwasaghna and kapharoga hara
20.	Mustaa	<i>Cyperus rotundus</i>	Kapha pitta hara	Jwaraghna , Deepana, Paachana
21.	Bila patra	<i>Aegle marmelos</i>	Vaata Kaphahara	Shothahara, Jwarahara
22	Parijata	<i>Nyctanthus arbor-tristis</i>	Kapha pitta hara	Jwaraghna, krimighna, mridu virechana

III. LIST OF POTENT MINERAL AGENTS

The following Mineral drugs can be used at different stages of management for COVID -19 in different formulations.

1. Hingula
2. Abhraka
3. Tamra
4. **Haratala**
5. Manashila
6. **Gauripashana**
7. **Swarna**
8. **Rajata**
9. **Pravala**
10. Trivanga
11. Swarnamakshika,
12. Shilajatu
13. Godanti

IV. LIST OF POTENT ANIMAL PRODUCTS

1. Go-dugdha and Go-ghrita
2. Go-Murta
3. Gomaya
4. Shringa
5. Madhu
6. Kasturi
7. Goroohana

Proposed Protocols for Prevention and Management

GENERAL CATEGORY-

Considering the fact that COVID-19 is pandemic in nature, prevention modalities have been outlined in best possible way.

Target:

To reduce virus load, virus clearance in the air and contact surface i.e. at home, at Hospital and at community place in large.

Proposed modalities could be Air sanitization and contact surface through

- Dhoopana at Home by medicated *Varti- Divya Dhooma Varti*.
- Medicated **Air Aerosol** at Hospital and other contact surface through medicated extract prepared from the composition of natural anti-microbial agents such as Neem- leaves or bark; *Karanja,- leaves bark, seeds, Nirgundi- leaves etc.,*
- Herbal disinfectant lotion with above drugs and Gomutra base for Bhumi Shuddhi.

To reduce viral load in the host -by creating unfavorable condition at the portal entry and contact surface. (Site of Sanchaya- Naso-pharynx and Oro-pharynx) through different methods like pratimarsha nasya, using potent tooth paste, gargling, steam inhalation, Dhoomapana/Dhooma Nasya and Neti.

To increase host immunity, for better defense from virus virulence reactions i.e.

- **Yuktivyapashraya** (Dinacharya, Ritucharya and Rasayana Sevana)
 - Physical exercise including breathing exercise,
 - Food- Pathyahara (wholesome Diet)
 - Medicines - Medicines possessing Rasayana effect
- **Satwavajaya-** Dhyana, pranayama, Yogasana, Sadvritta Palana(Following good conduct)
 - Patient counseling- to keep the Manas Strong- by experts and **Spiritual leaders** through multimedia.

- **Daivavyapashraya** – Chanting mantra, lighting Diyas, Prayer, performing Yajna, Homa etc., and to add up principles of Graha Chikitsa

SPECIAL CATEGORY FOR HIGH RISK GROUP

Front line workers (Medical and para Medical staff) and people involved in essential services like Police, Banking, Groceries, Post office, delivery agents and others working on similar lines are more exposed to the infected or suspected subjects.

Since many infected /suspected infected subjects are unlikely to be tested due to the constraints in large population and technical challenges, the above category can be recommended to use preparations of natural medicines for the prevention and good health.

Halting the process of the disease in the suspected or infected person where confirmed test is not done is necessary at the stage of **sanchaya**, as the disease is mostly asymptomatic. This will also prevent the infection transmitting from Person to family members and further to the community in the best possible way.

This is applicable to all **frontline high risk workers** and **Quarantine group**. However, in an emergency situation such as the current pandemic where many are dying every day. Therefore, it may be wise to use medications for the High risk and quarantine group and the preferred medicines are simple, inexpensive, safe, time tested, classical preparations in the Poly -herbo-mineral form enlisted in Preventive Protocol- Table No. B.

I. PREVENTION PROTOCOL

A. Primary Prevention - General Public

To follow ✓ Sanitization ● Social Distancing ● Home quarantine ● Personal Isolation

Type of Intervention	Measures	Remarks
Primary Prevention for	<ul style="list-style-type: none"> ❖ COMMUNITY LEVEL • 1. Bhumi Shuddhi - Sprinkling of extracts of Neem, Karanja etc. in the base of Gomutra • 2. Air Sanitization (Fumigation with Divya Dhoopa at Home and in Aerosol form at Hospitals and Community place)- (Rasa tarangini- Bhootabhinivesha Adhikara)/ Lakshadi Dhoopa (Su.Kal.6/4) • Social Distancing and other practices as per protocol • PERSONAL LEVEL • Dhooma nasya with Divya Dhoopa varti or Haridradi Varti • Steam Inhalation with Tulasi leaves+ Pudina Leaves+ Ajamoda+ Nimba • Gargling with - Turmeric + Nimba+ Salt + tankana in luke warm water • To use Neem based herbal tooth paste for oral hygiene • Khadiradi vati /Talisadi Vaakam / Eladi gutika/ Lavangadi vati- for frequent chewing • Pratimarsha Nasya with Sarshapa Taila/Tila Taila - instill 2 drops in each nostril • Eye wash with Mild Triphaladi Kwatha (3 gm of Triphala Kwatha Churna+100 ml of water- Boil for 3-5 minutes) to be used for eye wash using Eye cup, Proprietary preparations- Ophthacare eye drops or SriNetra or Sunetra- 2-3 drops thrice daily) OR • Anjana (Drops)- 2 drops on each eye with DaruHaridra Rasakriya, Yashtimadhu Rasakriya/ Kataka Rasakriya/ Guduchi RasaKriya/ Gomutra Arka- 1 ml -98 ml Rose water+1 ml honey 	<p>To create unfavorable environment for the Viruses.</p> <ul style="list-style-type: none"> • To create Unfavorable contact surface for the virus at the portal entry i.e Oropharynx, Naso-pharynx • Immunity boosting

Drink -for immune boosting

- **Herbal/ Medicated Tea**-(All or Any of these) Luke warm prepared with Tulasi, Pepper, Shunti, lemon, Yasthimadhu, Leaves of Bilwa, Guduchi Satva, Ashwagandha, Sariva, Ela and Jaggery
- **Golden Drink** - Natural Turmeric - 1 tsp with one cup of warm Milk
- **Ashwagandha Ksheera paaka** - Ashwagandha-1 tsp with one cup of warm Milk
- **Rasayana**- Chyavanaprash - 1tsp OR Swamla Compound of Doothapapeshwar (Fortified Chyavanaprash with Gold and Silver etc.) With 1 cup of warm milk on empty stomach- morning and evening

Pathya

Diet

Freshly prepared diet and served hot.

Light diet includes Kichadi/ Pongal/ Dhaliya/

- **Ganji- Rice gruel/ Ragi gruel**- with Ginger
Or
- **Yavaagu** Prepared with Rice/Rava with Coriander, Cumin, Ginger, Turmeric and pepper.
- **Amla (Indian Gooseberry)- Aamalaki payasa/ Jam/Chutney with pudina and coriander/ Vegetables- katu and tikta rasa pradhana-** patola, brinjal, Tender radish, karkataka, Punarnava leaves, Sarshapa leaves, fenugreek leaves, cluster beans, kakamachi etc.,
- Drink Luke warm Water
Or **Shadanga paneeya**- decoction prepared with Shadanga Churna- 10 gms+ Water 200 ml - Boiled, reduced to Half the quantity used for drinking.
- Take adequate rest

Apathya:

Heavy, Spicy, oily or fried foods; Junk foods, Curd, Cool drinks, Head bath; Exercise; Mental stress; Exposure to fan/ Ac should be strictly avoided.

B. For High Risk Subjects- Asymptomatic -PROPHYLITIC CUM FIRST LINE TREATMENT

<ul style="list-style-type: none"> Especially Front-line health care Professionals- Medical, para-medical and Supporting Staff working with COVID-19 People working Police, Banking, Groceries, Post office, delivery agents <p>and People who are Quarantined with no Symptoms</p>	<p>Along with the measures advised for Primary prevention,</p> <ol style="list-style-type: none"> Bath with - Water boiled with leaves of Neem, Karanja, Nirgundi with Gomutra Arka Orally- Tulasi leaves- 5-10 leaves with honey Or Tulasi Swarasa - 10 ml with honey Or Tulasi Arka -2 ml with 1 cup of warm water twice a day Or Guduchi Swarasa- 10 ml or Guduchi Satwa -1 gm with Honey or warm water Sudarshana Choorna- 5gms - twice a day with honey Or Sudarshana kadha - Sudarshana Churna- 5mgs- 100 ml of water reduced to half- thrice a day with Warm water Or Sudarshana Ghana vati Arogya Vardhini Rasa- with Vishaghna Qwatha 20ml (Charaka Shadvirechana Shatrashritiya Adhyaya) 2-2-2 	<p>Pratishyaya hara, Kasahara and Jwarahara aushadhas</p>
<ul style="list-style-type: none"> With mild symptoms, like Mild cough, Cold 	<p>Additionally,</p> <ol style="list-style-type: none"> Tribhuvanakirti Rasa-2-2-2 with Honey- Yogaratnakara (Jwara) with Godanti bhasma OR SANJIVANI VATI - 2-2-2- Sharangadhara Samhita Dashamoola Katutrayadi Kashaya- Kapha predominance- 30 ml TID Amruttottara Kashaya- Pitta predominance <p>For Children</p> <ul style="list-style-type: none"> Balachaturbhadra Churna with Madhu <p>Course Duration : 15 to 21 Days</p>	

Rationality:

- **Arogyavardhini Ras:** Ref: Rasa Ratna Samucchaya, Kushtha Rogadhikara

Imp Ing: Parada, Gandhaka, Loha Bhasma, Abhraka Bhasma, Tamra Bhasma, Shuddha Shilajatu, Shuddha Guggulu, katuki.

Bhavana Dravya: **Nimba Parta Swarasa**

Indication: All types of Jwara, Vata-pitta-Kaphad-**Bhutaan Jwaraan** and Kushta

Rationality: The nomenclature of the compound itself is suggestive of maintaining the health of a healthy individual and uplifting the health status. The Ingredients of Arogyavardhini Rasa includes potent Sroto Shuddhikara drugs targets to clear the Sroto Dushti of Dhatus and Malas.

Nimba Swarasa being a potent Anti-viral drug adds to the total drug effect in the line of reducing virus load/virulence.

- **Sudarshana Kadha:** Bhashajya Ratnavali

Imp Ing: Haridra, Vacaha, Yashti, Amalaki, Guduchi, katuki, haritaki, Pippali, Trikatu, etc.,

Rationality: The formulation with potent herbs corrects the imbalance of tridosha and all types of fever.

- **Balachaturbhadra Churna**

Chakradatta - Musta, Ativisha, Pippali, Kartakashringi

- **Tribhuvanakirti Rasa**-Yogaratnakara (Jwara)

Imp Ing- Hingula, Vatsanaabha, Trikatu, Pippali mula, Tankana.

Bhavana Dravya- Fortified with

- Tulasi Swarasa- Anti-viral

- Dhattura Sawarasa- Sthavara Visha- Acts as antidote for jangama Visha
- Shunti Swarasa as pachana

This Nobel preparation contains Sthavara Visha/Agada. Ie. Vatsanabha and Dhattura. Vatsanabha and Dhattura being Sthavara visha/Agada along with Jwarahara Dravyas. Tulasi has antiviral properties and Shunti being Amapachaka, Hinglua is Rasayana. The procedure of bhavana will potencies the compound simultaneously micronizes the particles of the formulation for better absorption and molecular action.

- **Sanjivani vati**- Ref: Saharangadhara Samhita. Madhyama Khanda. 7/18-19
Imp Ing: Nagara, Vidanga, Pippali, triphala, vacha, Guduchi, ballataka, Vatsanaba, Gomutra,
Rationality: The Sthavara Visha/ Agada are potent Jwara hara and indicated even in Sarpadamsha(Snake bite). Gomutra being Vishahara and kaphahara acts actively against the condition.

II. TREATMENT PROTOCOL

<p>I.</p> <p>STAGE I</p> <p>Patients having travel history with Marked Symptoms like Sneezing, Cough, Fever, Malaise etc.,</p>	<p>In addition to the measures advised in primary Prevention,</p> <ol style="list-style-type: none"> 1. Sudarshana Choorna- 5gms - twice a day with honey Or Sudarshana Kadha - Sudarshana Churna- 10 gms in 200 ml of water reduced to half- thrice a day 2. Talisadi Churna /For Diabetics-Panchakola Churna 3. Sarvatobhadra Rasa with Guduchi Satva 4. Kastooribhairava Rasa - Madhyama 5. Jayamangala Rasa 6. Guduchyaadi Kashaya 7. Anulomana with Haritaki Churna or tablet or Drakshadi Kashaya 8. Brihat Hardira Khanda- Bhaishajya Ratnavali. Shita pitta Udarda Kotha 	<p>To Halt the progression of the disease, Intervention is Required which should be on the lines of</p> <ul style="list-style-type: none"> • Ama-Pachana, • Pratishyaya hara, • Rogi bala Vriddhikara, • Vishaghna • Jwarahara and • Kasa Shwasahara • Vatanulomana Karma
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	Dose and Anupana - As per Roga and Rogi bala	
	<p>Rationality: Sarvatobhadra Rasa: [Ref:Rasa Saara Sangraha, Jwaraadhikara] Ing: Hingulotha Parada, Gandhaka, Abhraka, Triphala, Trikatu, lavanga, Musta, Karpura, Kushtha etc., Rationality: The above potent Herbo-mineral compound targets the acute phase of respiratory distress and prevents the complications due to fever.</p> <p>Kastoori bhairava Rasa:Ref: Bhaishajya Ratnavali.5/813-818 Ing: Vatsanabha, Katuki, Kaharpara, Lavanga, Swarna Bhasma, Rajata Bhasma, Kanta Loha, Dhattura, Jatiphala etc.,. Rationality: This formulation indicated in all types of complicated fever contains Sthavara Visha which can act against Jangama Visha effectively.</p> <p>Jayamangala Rasa Ref : B.R. Jwaradhikara Imp Ing: Swarna, Raupya Bhasma, Tamra, Vanga Bhasma Bhavana in Dhattura, Shephali, Kiratatikta, Kwatha, Dashamula Kwatha- 3 times in each Dravya. Ind: Dhatugatatva and Bala Pushtikara Rationality: Most potent formulation considering the composition and Bhavana Dravya indicated in complicated fevers and acts as immunebooster.</p>	
<p>STAGE II with aggravated symptoms COVID-19 Positive case Without co-morbidity</p>	<ol style="list-style-type: none"> 1. Sudharshana Churna/ Sudarshana Ghana vati 2. Nimbadi Kwatha + Guduchyadi Kwatha+ Vasadi Kwatha 4. Tapyadi Loha 5. Swasakuthara Rasa 6. Ananda Bhairava Rasa - In case of Atisara (Diarrhoea) 7. Rasa Manikya with Ashwagandha choornam <p style="text-align: center;">Dose and Anupana- As per Roga and Rogi bala</p> <p>Shwasakuthara Rasa: Ref; Bahavaprakasha- Shwasaroga Imp Ing: Shuddha parade, Shuddha gandhaka, Shuddha Manahshila, Shuddha Tankana, Vatsanaabha, Trikatu etc., Anupana: With Honey Rationality: The above ingredients have been proved to be effective in combating with acute respiratory infections</p>	<p>More potent drugs with Superior preparation methods for combating Sannipataja conditions</p>

	<p>Anandabhairava Rasa : Rasa Yoga Saara – 29- Ing: Hingula, vatsanaabha, trikatu, tankana Bahavana with Jambira Swarasa Anupana: Takra, Vijayaa (<i>Cannabis indica</i> powder) Prescribed in this stage for Jwaratisara.</p>	
<p>With Co-morbid Factors Elderly person and with Alpa Rogi bala</p>	<p>With Co-morbid factors</p> <ol style="list-style-type: none"> 1. Sameerapannaga Rasa 2. Jayamangala Rasa 3. Vilvadi Gutika 4. Kastoori Bhairava Rasa: 3- Brihat 5. Saarivadi panaka/ Kwatha 6. Bharangyadi Kashaya <p>Dose and Anupana- As per Roga and Rogi bala</p>	
	<p>Sameerapannaga Rasa Ref: Rasa Yoga Sagara Imp Ing: Suddhaparda, Shuddha Gandhaka Gauripashana, Haratala, Tulasi Swarasa Bhavana, Aunpana: Nagavalli Swarasa. Ind: Kapha Roga and Sannipatika condition Rationality: Gauripashana(AS_2O_2) being the most potent in Sthavara Visha varga and prepared in Kupipakwa method . This formulation is added with Tulasi and Nagavalli</p> <p>Kastoori bhairava Rasa:3- Brihat Ref: Bhaishajya Ratnavali.5/819-826 Imp Ing: Loha Bhasma, Harataala, Taamra Bhasma, Vidanga, Abhraka Bhasma, Amalaki, Musta, pravaala, Rationality: This formulation is indicated in all types of Jwara, Abhichaara, Bahutika Jwara, Bhuta-Preta- Pishacha jwara. Also specifically indicated in Jwara varying from Day 1, Day 3, Day 8 and Day 15.</p>	
<p>STAGE III Dhatu Paaka/Dhatu gata Jwara lakshana</p>	<ol style="list-style-type: none"> 1. Malla Sindhura- Ref- Rasa Tarangini- Shwsa-Kasa-Peenasa – Contains Gauripashana (AS_2O_2) 2. Suvarna Malini Vasanta Rasa- Yoga Ratnakara/ Or Vasanta Malati Rasa- B.R. 3. Kasturi Bhairava Rasa- Brihat 4. Maha Vasadi Kwatha 5. Kanakasava 	<p>Aggressive treatment with protecting Rogi Bala (Ojus),</p>

	6. Bharangyadi Kashaya 7. Frequent Nebulization with Bharagnyadi Arka Dose and Anupana- As per Roga and Rogi bala	
STAGE IV Upadrava lakshana Acute Respiratory Syndrome complications	1. Hemagarbha Pottali Or Siddhamakaradhwaja 2. Malla Sindhura 3. Dashamoolarishta 4. Amritarishta 5. Bharangyadi Kashaya	<ul style="list-style-type: none"> • Superior Preparations with potent ingredients used for enhancing Rogi bala. • Oorjaskara
AFTER DISCHARGE Punaravartaka Jwara Chikitsa To reduce the viral Load and prevent the relapse of the condition	Shareera Shuddhi and Rasayana Chikitsa <ul style="list-style-type: none"> • Mridu Virechana or Anulomana with Haritaki/ Aragwadhadi Qwatha • Kiratatiktadi Kashaya - Kirata, Musta, katuki, Amruta, parpataka cha.chi3/ • Brihat Hardira Khanda • Vasavalehya- Brihat- Rasa Tarangini Imp Ing: Vasa, Katuki, Haritaki, Bhumyamalaki, Bharangi, Ativisha, Abhraka bhasma, Shukti bahsma, Shankha bhasma etc., Or Vasahareetaki lehya- Gada Nigraha • Jeevantlyaadi Ghrita 	Shodhana procedures and Rasayana



General guidelines for using this protocol

1. As in any epidemic, take the travel history and contact history of the patient first.
2. Examine the patient well.
3. Assess the Rogi bala using the ten-point clinical examination protocol (dasha vidha pareeksha vidhi) and calculate the functional status of the patient including assessment of koshta and agni of the individual.
4. Order the needed laboratory or imaging panels as and when required
5. Definitely have an assessment of the vyaadhi-avastha in a meticulous manner, as some medicines may be contra-indicated in some specific avasthas.
7. Assess the status of ojus and predict the chance for an immediate casualty.
8. The selection and combinations of medicines should be done considering the Bala of Rogi, Agni, Koshta and the Rogavastha.
9. The dosage of each pharmaceutical preparation shall be fixed as per the classical guidelines and research updates.
10. The medicines described in each stage shall be utilized judiciously in the succeeding stages also.
11. General safety measures for doctors, paramedics and health workers need to be ensured in the facility.
12. The technological support of western medicine has to be ensured when and where necessary.

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!! Namaste !!



HIGHLIGHTS OF ALL PROTOCOLS
COMPILED BY
DR. VENKATA KRISHNA

Dr. S. N. Belawadi report summary

Author opines that COVID-19 being a pandemic may be understood and treated through Ayurveda by looking into the stages of disease.

The treatment according to author can be classified as different avasthas (Stages)

1. Avastha (STAGE): 0
Patient with positive travel history/ contact with suspected or diagnosed cases/ home quarantine/ isolation with no or very mild symptoms.
2. Prathama Avastha (STAGE): 1
Shleshmika Sannipata Jwara (Alasya, Aruchi, Hrillasa, Daha, Vamana, Bhrama, Tandra and Kasa) Pathologic hallmark.
3. Dwitiya Avastha (STAGE): 2
Vata Shleshma Pradhana Sannipata Jwara with Swasa Upadrava (Sthaimitya, Parva bheda, Shirograha, Pratishyaya, Kasa and Swedabhada).
4. Tritiya Avastha (STAGE): 3
Dhathupakavastha-Pitta Prakopa-Vatakaphanubandhi Sannipata (Shaitya, Kasa, Aruchi, Tandra, Pipasa, Daha and Hrudiviyatha)
Jwara Shamana, Dhatuposhaka, Dhatupaka nivarana, Kasa, Swasahara, and Rogibalasthirakara.
5. Chaturtha Avastha (STAGE): 4
Samasannipatavastha (Hikka, Kasa, Shaitya, Vamana, Antardaha, Mahashwasa, Marma Chheda)
Majjadhatugata and Swasavarodha Needs Emergency Management
6. Stage of Resolution: Rasayanachikitsa

All the stages are being advised appropriate medications. Along with this Preventive Measures like Achara Rasayana, Sadvruttapalana, Daivavyapashrayachikitsa Dhupanachikitsa and Mantrachikitsa.

Necessary Aharakalpa for Pathya and Apathya are also mentioned.

Dr. Anand Katti report summary

Author of the proposal does not give any clinical guidelines for the treatment, but analyses about the primary and index case of the epidemic on classical Ayurvedic lines. He suggests few preventive measures & cleanly measures.

1. Preventive measures

1. Prevention from contact of Bhoota Vayu. (Air affected with COVID 19 virus).
2. Prevention from contact of Visha Vayu (Air contaminated with Droplets).
3. Practice of Sadvrutta (Good conducts).

2. Management measures:

1. Maintaining the hygiene- Shoucha.
2. Frequent cleaning of Hasta Paada.
3. Frequent cleaning of Malaayana. (Malaayaneshu abheekshnah)- Hands and external orifices to be washed frequently i.e hand wash with soaps, sanitiser etc.
4. From the concept of Chatri Dandi Mouli (Ca.Su. 8). Mouli can be interpreted and borrowed as wearing **Mask**.
5. Avoiding exposure to Visha vayu (Vishaninah Purovata- Ca. Su. 8.19)
6. Surroundings to be fumigated (Dhoopana).
7. Nirmalaambara Dhaarana- wearing washed sun dried clothes.
8. Ushnodaka Pana.
9. Vihara- Vyaayama and Brahmacharya. (Ca.Vi.4)
10. Ksheera and Grutha Prayoga as Rasayana. Rasayana is indicated in Janapadodhwamsa Chikitsa also.
11. Regular dinacharya with special emphasis on Danta Dhaavana, Nasya, anjana and Abhyanga.
12. Strictly following Medical/Health and Govt Advisories. (na niyamam Bhindyaat- Ca. Su. 8. 25)

Dr. Nagaraja S. report summary

Author opines that COVID-19 being a pandemic may be understood and treated through Ayurveda along with an integrated approach whenever needed. Roga bala, Rogibala, and Vikara vighatabhavaabhava play major roles in the host pathogen interaction thus deciding the severity of the disease in the infected.

The treatment according to author can be classified as

- I. Preventive care
- II. Clinical care
 1. Asymptomatic
 2. Mild to Moderate cases
 3. Severe to critical cases
 4. Rehabilitation
 5. Management of Residual dysfunctions

I.Preventive care: This is for not tested positive, High risk, or Low risk under Quarantine. Rasayana modalities are the basic line of treatment in the preventive management of Janapadoshwamsa or Pandemic disorders. Here both Achararasayana and Aushadha Rasayana have important roles. Rasayana drugs improves the host defence system by its Urjaskara properties i.e; by enhancing dehabala.

II.Clinical care: Stage wise

1. In asymptomatic stage bilwadi gulika, samshamani vati, arogyavardhini rasa, are the medicines of choice
2. In symptomatic – mild to moderate cases; shadanga paneeya, tulasi patra swarasa, ardraka swarasa, sanjeevani vati, dashamoola kwatha, dashamoola arishta, amrutashatakam, amrutarishta, maha sudarshana churna / ghana vati, tribhuvana keerti rasa, mrutyunjaya rasa, vishama jwarahara pancha kashaya, shwasa kuthara rasas, shwasa kasa chintamani rasa, ananda bhairava rasa, talisadi churna, sitopaladi churna, vasakarishtha, kanakasava are the medicines of choice.
3. In severe/critical cases as supportive treatment along with biomedicine if protocol permits; jaya mangala rasa, makaradhwaja, mahalakshmvilasa rasa, vasantamalati rasa, hemagarbhapottali rasayana can be used.
4. For post viral infection rehabilitation; tikta ghruta, punaravartaka jwarahara kashaya, swarna malini vasanta rasa, indukanta ghruta brahma rasayana can be used.

Along with the above prescriptions author also opines to have a proper diet according to the clinical condition.

Dr.Shivlingappa Arikeri report summary

COVID-19 is a recent global health issue which has no proper treatment so far. The symptoms of COVID-19 are very similar with the some of the conditions like Sannipataja Jwara, Kshataja Kasa, Pachyamana Jwara in Ayurveda. Only symptomatic treatment is adopted in Modern system of medicine. Here an attempt is made to compile and compare Etiopathogenesis & Management (Preventive & Curative) of COVID-19 as per Ayurvedic classics in the form of Trisutra of Ayurveda for better understanding and evidence based clinical practice in mild & moderate illness. This protocol can be standardized & established after Clinical trial.

This report has treatment protocol classified into three categories

1. Preventive measures
2. Curative measures
3. Post recovery supportive management

1. Preventive measures:

Health promotion for common public by imparting Immune boosters like Amalaki, Vidarikanda, Ashwagandha, Indukantha ghrita, Ashtamangala ghrita, Lashuna ksheerapaka, Indulkantha kashaya, Shadanga paneeya. These have immune stimulant & modulatory action. These will stimulate the immune system in the community there by preventing onset of the disease of viral/bacterial origin.

Primary prevention for common public by means simple preventive care practices like Kavala & Gandusha, Nasya, Akshiparisheka & Dhupana. This is advised for those who are in Quarantine / Isolation / Vulnerable group.

2. Curative measures:

Curative measures include administration of Ayurvedic compound formulations in classically prescribed dosage form & dosage. This includes medicines like; Shatyadi Varga Kashaya, Bruhatyadi gana Kashaya, Trayushanadi Gritha, Pushkaramulasava, Dashamula Katutraya Kashaya, Amritarista Pippalyasava, Kanakasava. Along with these medications different Yavagu(Dietary preparations) can be given as diet.

3. Post Recovery Supportive Management:

After recovery from active infective phase certain strength enhancing & immunity stimulating medicines can advocated. This include Agastya Hareetaki Rasayana, Chyavanaprasha Avaleha, Vardhamana Pippali Rasayana. Along with these to improve Physical stability & Psychological balance, Yogasna & Pranayama practices are advised.

Dr. Venkatakrishna KV report summary

Ahara is considered as *Mahabhaishajya* (the superior medicine). Various life style disorders and numerous diseases occur due to faulty dietary habits which may be prevented by proper *Ahara* and eating habits.

Hitakara/Pathya food (Wholesome food) as per Ayurveda is conducive for the maintenance of good health, longevity, strength, intellect, good voice and complexion.

Yoga means ‘union’, a union of the mind, body, and soul. It is about the present, self-awareness, peace of mind, self-healing, self-realization, detoxification of body, self-discovery, and overall well being

For easy understanding the diet & yoga plan can be classified in 2 stages

- 1. Diet & Yoga during Quarantine**
- 2. Diet & Yoga during active infection state**

1. Diet & Yoga during Quarantine: A detailed daily regimen is planned starting from getting up to bed time. This includes dos & do not’s for the whole day. A detailed, dietary item to be consumed & not to be consumed is included. List of Yogasana, Pranayama & Meditation practices are also included in this section.

2. Diet & Yoga during active infection state: Pathya is indispensable component of treatment prescription. Diet according to the progression of disease is planned in this section.

Dr. Raghavendra naik. report summary

Author of the protocol considers this as a janapadodhwamsa vyadhi and co relates the symptoms of the disease to the symptoms of Vata Kapha Jvara. Characteristic features of vata-kaphaja jvara as per Charakasamhita are sheetaka (cold), kasa (cough), gourava (heaviness of the body), tandra (drowsiness), pratishyaya (running nose), and shirograha (headache), and moderately high rise of fever. Symptoms mentioned for Vata kaphaja jvara in Astanga hridaya of Vagbhata may be correlated with acute fever due to upper respiratory tract infection (URTI) and other associated symptoms like Shvasa, kasa, peenasa, shirashula and parvabheda.

Treatment is advocated both with single drugs & polyherbal medicines.

It is considered under the following headings

- Prophylactic management-non infected cases
- Management of high risk group
- Management of subjects exposed to risk
- Management of active cases
- Management of complicated cases

Appropriate medicines are chosen in each stage, it can be single herb or poly herbal preparation.

Along with the above prescriptions author also opines to have a proper diet according to the clinical condition.

Dr. Sarbeshwar Kar report summary

This proposal is principle based analysis of the prevailing situation. Hetu(Cause), Linga (Symptomatology) & Oushadha (Therapeutics) are those principles on which the whole proposal is drafted.

Hetu(causative factor) is analysed with multiple directions and concluded as it can be grouped under the class of aagantuja vikaara with special reference to the class of Bhuutabhishangaja (microbiological etiology). This pathological condition also can be attributed to *Aupasargika* and *sankramika disease*.

In Linga (Symptomatology) a detailed staging has been done and classified in 4 stages

- Stage 1- Patients having travel history with Marked Symptoms like Sneezing, Cough, Fever, Malaise- Kahapa- vata Sannipata Jwara
- Stage 2- Aggravated symptoms
- Stage 3- Dhatupaaka lakshana and Dhatu gata Jwara lakshana
- Stage 4- Upadrava like Shwasa- Acute respiratory syndrome

In Oushadha(Therapeutics): This is classified in two headings, Preventive & Curative

For Prevention is advised at Individual & community level.

Treatment protocol is based on staging & symptomatology. Various Polyherbal, mineral & animal origin medicines are used on need basis.

Along with the above prescriptions author also opines to have a proper diet according to the clinical condition.

Dr. Srinivas Vodeyar report summary

This is principle based analysis of the current situation. Hetu(Cause), Linga (Symptomatology) & Oushadha (Therapeutics) are those principles on which the whole proposal is drafted.

Hetu analysis: The deranged bodily humours such as, Vayu, Pitta and Kapha should be looked upon as the primary sources of all diseases. Adharma karma (sinful act) committed during an individual's present life and the previous life is responsible for the vitiation of these factors. Intellectual errors (prajnaparadha) are the cause for both these types of sins. Janapadodhwamsa vikaras are consequences of sin committed by a whole community. Dalhana clearly states that upasargaja rogas are due to spread from an infected person to another while Samsargaja are more potential in spreading from person to person..

Linga Analysis:

1. Those which spread by air (droplet type infection) through nose are kasa, shwas, pratishyaya, gandhajnana, bhrama and shiroruja.
2. Those spread by twagindriya are jwara and masurika. (Fomite Transmission).

There is close resemblance in the lakshanas of Janapadodhwamsa vikaras mentioned by Sushruta

Aoushadha analysis: Dalhana advises migration to a healthy or unaffected locality. Control or Pacification of the senses. Averting of pain(discomfort) due to prevailing situation. Regret for having done/ committed something wrong/sin.

Atreya opines that those afflicted with janapadodhwamsa vyadhis could be treated with Panchakarma procedures and administration of rasayana measures (rejuvenative procedures) with previously collected drugs, along with sadvritta (observance of noble conducts) etc. Truthfulness, compassion for creatures, charity, sacrifices, worship of gods, the observance of right conduct, tranquility, prophylactic protection of oneself, and seeking ones own good, residing in a wholesome country, the keeping of continence, consulting scriptures and the great self restrained sages, constant association with the righteous, the well dispositioned and those who are approved by the elders- all this with a view to preserving life, has been indicated as medicine to those who are not destined to die in the terrible times.

For treatment purposes cases can be grouped as

- Group A- Fever with or followed by cough and shortness of breath.
- Group B – Cough and Shortness of breathe without fever.

The Stage wise analysis of treatment of these groups is explained. Treatments are designed & customised on need basis.

Treatment will be successful only if preceded by Daivavyapashraya chikitsa because of Prjnaparadha being Samavayi karana of Janapadodhwamsa karana and hence Sushruta and Charaka have included as the primary line of treatment in the Janapadodhwamsa vikara

Dr Jagadeesh Yaji report summary

Author of opines that COVID19 is a janapadodhwamsa vikara(epidemic disease). He correlates the mode of spread of the disease with based on the classical knowledge from Ayurved samhitas.

He opines the treatment should be based on the lines of treatment of Janpadodhwmsa only. Author explains the principles of treatment also on the same lines. ‘The presentations explained in Ayurveda as the *poorvarupa* (premonitory symptoms) of *Jwara* and *Pratishyaya* are seen as common manifestations in the initial stage of viral infestations affecting the respiratory system. Moving ahead, while explaining the treatment, primary importance is given to the immunity/ disease resistance capacity of the patient. It is said that for fast recovery, good prognosis and to prevent worsening of the disease, immunity needs to be looked after along with symptomatic treatment.’ He advocates single herbs, Polyherbal preparations and medicated diets in his protocol.

Author summarizes like this :

1. Maintain healthy social distancing as explained in *oupasargika roga*.
2. Drinking hot water.
3. Repeated sipping of *shadanga paneeya*.
4. Use of medicated gruel, *peya*, *yavagu*, *mudga yoosha* for nutritional supplementation and immune modulation
5. Immunomodulator / *rasayana prayoga* helps to build up resistance against the diseases and early recovery.
6. Gargling with *Triphala kashaya* or warm salt water with turmeric or licorice helps to prevent the proliferation of the viruses in mouth and throat, thus preventing their invasion to lower respiratory organs.
7. *Triphala kashaya* filtered through layers of cloth, is used to clean the eyes (*netra prakshalana*) which prevent the entry of viruses.
8. Instilling two drops of *Anu taila* in both the nostrils (*pratimarsha nasya*) keeps the nasal cavity and nasopharangeal pathway clean thus preventing entry of pathogens.
9. *Satwavajaya chikitsa*: by doing *pranayama*, *dhyana* (meditation) , *homa* etc. rituals, helps to build confidence amongst the people of the community and prepare them mentally to face the situation.

Dr Prashanth A.S report summary

Author explains the present situation as a Janapada-udhwamsa vikara. It can be grouped under the class of aagantuja vikaara with special reference to the class of Bhootabhishangajam (microbiological etiology).

He analyses the etiopathogenesis in two ways

1. With reference to Janapadodwamsa Vimana Adyaya of Charaka.
2. With special reference to nija and agantu Karana as per Charaka, sutrasthana.

Treatment is considered under 2 headings

- Adravyabhuta - No Drug approach
- Dravyabhuta - Drug therapy

In adravyabhuta chikitsa, isolation, daiva vyapashraya chikitsa are mentioned

In dravyabhuta chikitsa single effective herbs like Dadima, Matulunga, Draksha, Somalata, Kasamarda, Kantakaridwaya, Karpoora are considered. Polyherbal preparations like Sitopaladi choorna, Taleesadi Choorna, Rajanyadi Choorna, haridra khanda, Karpooradi choorana, Swasananda gulika, Amritottara kashaya, Kanakasava, Tulasi asava, mrigamadasva etc can be used. Herbomineral preparations are also prescribed on need basis. Post infection state can be managed with rasayana medicines.