



Isagogic Study of *Manodaihic* Impact of Covid-19: During Illness and Post Treatment

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ABSTRACT

Background: Ayurveda experts need to work on COVID-19 to prevention, integrative treatment approaches, side effect after cured and pre-requisite to develop stand-alone. At present, Ayurvedic experts do have access to COVID-19 patients in govt sector. In these circumstances, based on review of modern medical and classical Ayurvedic literature combined treatment of COVID-19 patient will gain significance results.

Objectives: This paper aims to develop an Ayurvedic clinical profile of COVID-19 by literature review supported by analysis of clinical data of a cohort of COVID-19 patients.

Methods: A careful correlation was done with the data collected from selected Ayurvedic classical texts and expert views of clinical practitioners to arrive at a preliminary Ayurvedic clinical profile of COVID-19.

Results: COVID-19 understood from the Ayurvedic perspective as *Vata-Kapha* dominant *Sannipata Jvara* of *Agantuj* origin with *Pittanubandha*. The asymptomatic, presymptomatic, mild, moderate, severe and critical stages of COVID-19 with varying clinical presentations have been analysed on the basis of *Nidana, Doṣha, Duṣhya, Nidana-Panchaka* and *Shaṭ-Kriyakala* to present a preliminary clinical profile of the disease.

Conclusions: In this paper, we have demonstrated that a preliminary clinical profiling of COVID-19 from the Ayurvedic perspective is possible through literature review supported by discussions with Allopathic clinicians as well as examination of patient case records. The provisional diagnosis proposed can be further developed with continued review of literature, wider cooperation and teamwork with Allopathic physicians and access to clinical data as well as direct clinical assessment of COVID-19 patients.

Keywords: COVID-19, *Ayurveda*, Integrative protocol, Clinical profile, *Manodaihic* Impact

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1. Introduction

World community is facing an unprecedented pandemic of novel corona virus disease (COVID-19) caused by Severe Acute Respiratory Syndrome Corona virus 2 (SARS-CoV-2). This disease is spread globally. The COVID-19 pandemic has tightened its grip on India. In India on 12/10/2020 on 8:00 am IST (GMT\$ 5:30) total no. of cases 11,139,516; active cases 1,70,126; deaths 1,57,385 is registered till 03/03/2021 on 8:00 am IST (GMT\$ 5:30) is registered.¹ Apart from physical sufferings, the consequences of this quarantine on the mental health and well-being at personal and population-levels are many fold. Imposed mass quarantine applied by nationwide lockdown programs can produce mass hysteria, anxiety and distress, due to factors like sense of getting cornered and loss of control. This can be intensified if families need separation, by uncertainty of disease progression, insufficient supply of basic essentials, financial losses, increased perception of risk, which usually get magnified by vague information and improper communications through media in the early phase of a pandemic. Previous outbreaks have reported that psychological impact of quarantine can vary from immediate effects, like irritability, fear of contracting and spreading infection to family members, anger, confusion, frustration, loneliness, denial, anxiety, depression, insomnia, despair, to extremes of consequences, including suicide. Suspected isolated cases may suffer from anxiety due to uncertainty about their health status and develop obsessive-compulsive symptoms, such as repeated temperature checks and sterilization. Effects such as post traumatic stress disorder (PTSD) have been reported, symptoms of which have been positively associated with the duration of quarantine. Post quarantine psychological effects may include significant socioeconomic distress and psychological symptoms due to financial losses. Another very important aspect is stigmatization and societal rejection regarding the quarantined cordon in forms of discrimination, suspicion and avoidance by neighbourhood, insecurity regarding properties, workplace prejudice, and withdrawal from social events even after containment of epidemics.

In this paper, we are demonstrating that it is possible for Allopathic and Ayurvedic doctors to cooperate and work together to understand the disease better from an Ayurvedic perspective. This will be the first step to develop an integrative treatment protocol incorporating Ayurveda for best outcomes in the management of COVID-19.

To move in this direction, it becomes necessary to develop an Ayurvedic diagnostic and treatment protocol for integration into the standard treatment guidelines of COVID-19. We have a precedent in China, where Traditional Chinese Medicine (TCM) doctors were actively involved in the treatment of COVID-19 patients and the TCM diagnostic classification as well as treatment was integrated into the official management guideline. More than 60,000 patients received TCM medications based on this protocol² and TCM interventions have also been included in the official handbooks that recommend protocols for management of COVID-19³. TCM interventions have also figured in research studies³ that have been initiated to discover a remedy for the disease⁴.

2. Pathophysiology (Samprapti) of Covid-19 According to Ayurveda

In this *Roga* (disease), the *Roga Marga* is *Abhyantara* [*Ashtanga Hridayam Sutra Sthana*, 12/44-49], as *Jwara* (fever), *Svasa* (respiratory distress) and *Kasa* (cough), the three major symptoms of COVID-19 belong to this *Roga Marga*. *Abhyantara roga marga* is one of the three *Roga Margas* or “pathways of disease” as described in *Ashtanga Hridayam*. There is *Pranavaha Shroto Dushti* [*Charak Samhita Vimana Sthana*, 5/7] observed in this disease, as there is severe respiratory distress along with other symptoms, sometimes leading to death. The seat of affliction of this disease is primarily *Uras* (chest region).

Based on the above, Coronavirus disease can be correlated as *Agantuja Sannipataja Jwara*, which is of *Vata-Kapha* predominance [*Charak Samhita Chikitsa Sthana*, 3/92; 3/128-129]. This *Jwara* can be classified as being *Agantuj* (external) caused by *Bhoota Abhishangaj* [*Charak Samhita Chikitsa Sthana*, 3/111-114], which aggravates all the three *Doshas*. Since all the three *Doshas* are aggravated it is labelled *Sannipataja*. The spread and affliction caused by the virus in this *jwara* can be understood in Ayurveda under the *Bhoota Abhishangaj* classification. According to *Ayurveda*, *Agantuj Jwara* is to be treated as a *Nija Jwara* caused by an imbalance of *Doshas* [*Charak Samhita: Sutra Sthana*, 19/7, *Charak Samhita Charak Samhita*, 3/128].

3. Etiology of Covid-19 According to Ayurveda

According to MWM, the etiology of this illness is now attributed to a novel virus belonging to the coronavirus (CoV) family. It is now named SARS-CoV-2.⁵ In *Ayurveda* it can be correlated with a *Vata-Kapha* predominant fever with all the characteristics of a *Janapadodhwamsiya Vikara*. It is a highly contagious disease. The methods by which contagious diseases spread from one person to another are described in *Susruta Samhita: Nidana Sthana*, Chapter 5.

4. Psychosocial Impact of Covid-19 on Different Strata of Society and Suggested Interventions

Social strata	Psychosocial issues	Intervention
COVID-19 positive patients and quarantined individuals	<ul style="list-style-type: none"> •Loneliness •Anxiety •Panic •PTSD • Depression 	<ul style="list-style-type: none"> ✓ Secure communication-channel between patient and family ✓ Delivery of progress-reports and discussion with families on further treatment plans through telephone, video-calls, what's app, e-mail etc. ✓ In-time referral ✓ Psychotherapy, if needed ✓ Psychiatric follow-up post-discharge, if needed
Health care providers	<ul style="list-style-type: none"> •Fear of worthlessness •Guilt •Overwhelming work-pressure •Deprivation of family while being in quarantine •Burnouts •Depression •Fear of infection and outcomes •Uncertainty •PTSD •Substance abuse 	<ul style="list-style-type: none"> ✓ Support from Higher authority ✓ Clear communication and regular accurate updates regarding precautionary measures ✓ Sustained connection with family and friends through smart phone ✓ Shorter working duration, regular rest period, rotating shifts ✓ Sufficient supply of appropriate PPE ✓ Arrangements for well-equipped isolation wards specific for infected HCPs, insurance-system for work-related injuries ✓ Long term psychological follow-up
Children	<ul style="list-style-type: none"> •Boredom •Anxiety related to educational development •Irritability •Developmental issues •Fear of infection 	<ul style="list-style-type: none"> ✓ Proper parenting ✓ Online classes, online study material ✓ Clear, direct, open and detailed information about disease transmission and precautionary measures ✓ Maintenance of sleep cycle, physical exercise schedule ✓ Educate about proper hygiene practice
Old age	<ul style="list-style-type: none"> •Irritability, anger, fear, anxiety, cognitive decline •Deprivation from pre-scheduled check-up and/or follow-up sessions •Difficulties in accessing medicines due to travel restriction and lockdown 	<ul style="list-style-type: none"> ✓ Home-based physical exercise during quarantine ✓ Sessions via telephone, online video-conference for physician guidance and mental health services ✓ Essential drug-delivery system via online approach
Marginalized community	<ul style="list-style-type: none"> •Depression •Stress •Financial insecurity •Stigma of discrimination •Health crime 	<ul style="list-style-type: none"> ✓ Protection of basic human rights ✓ Providing proper accommodation ✓ Adequate food and waters supply from government and NGO ✓ Affordable health care delivery ✓ Education about social distancing, hygiene ✓ Referral to psychiatrists, if needed
Psychiatric patients	<ul style="list-style-type: none"> •Hampered routine psychiatric follow-up •Addiction •Violence 	<ul style="list-style-type: none"> ✓ Structured therapy ✓ Counselling via telephone, online chat ✓ Online based psycho-reduction therapies ✓ Proper supply of prescribed medications

Besides COVID-19, the 21st century is also the era of emerging pandemic of mental illnesses. Thus, psychological and social preparedness of this pandemic carries global importance.

5. Psychological Disease in Ayurveda Prospective

Ayurveda aims at preservation and promotion of health, and prevention and cure of diseases through the concepts of positive physical and mental health. Management of mental disorders or psychological medicine was an area of specialization even during *Acharaya Charaka's* time (500 B.C.). While defining 'Ayu' it is said that 'life is the combined state of body, senses, mind and soul. The statement that 'manifestation of *Mana* occurs during 5th month of pregnancy in the foetal body' indicates the co-existent nature of mind and body. Indicating the direct influence of *Mana* on certain physiological functions, it is said that anger, and fear could cause diaphoresis. *Vayu* which is one of the *Tri-doshas* (the three bioentities viz., *Vata*, *Pitta* and *Kapha*

which are generally more related to *Sharira*) is said to be the controller and prompter of *Mana*. It is also said that the excited *Vayu* depresses mind, gives rise to fear, grief, stupefaction, feeling of helplessness, delirium etc.

Mana has two basic qualities viz., *Anutva* (atomic nature) and *Ekatva* (unitary nature). But it is difficult to understand these qualities directly and clearly. Therefore, *manas* is said to be constituted of 3 more operational qualities viz., *Stava*, *Raja* and *Tama*. These are understood by the role they play in the emergence of three different mental response patterns. For example, *Satva* or *Kalyana-ansha* is understood by self control, knowledge discriminative ability, power of exposition, etc. *Raja* or *Rosha-ansha* is understood by violence, despotic envy, authoritarianism, self adoration, etc. *Tama* or *Moha-ansha* is understood by dullness, non-action, sleep etc.

It is said that in *Sharirika Vikara*, *Sharira* gets affected first and the *Mana* next. In *Manasika Vikara* namely- *Udvega* (anxiety), *Kama*, *Shoka*, *Abhyasuya* etc., *Mana* is affected initially and *Sharira* later.

Ayurvedic treatment for the mitigation of the diseases has always been through “wholistic approach” while it has only recently ushered in the west as big movement in the field of treatment. *Ayurveda* recommends three types of *Chikitsa* viz., *Daivavyapashraya Chikitsa* (divine or spiritual therapy), *Yuktivyapashraya Chikitsa* (medicinal therapy) and *Satvavajaya Chikitsa* (psycho therapy), for treating mental illnesses.

A. DAIVAVYAPASHRAYA CHIKITSA:

This refers to measure like *Mantra* (incantation), *Aushadhi* (wearing sacred herbs), *Mani* (wearing precious gems), *Mangala* (propitiatory rites), *Bali* (oblations), *Homa* (sacrifice), *Upahara* (offerings), *Niyama* (vows), *Prashchitta* (ceremonial penitence), *Upavasa* (fasts), *Swastyayana* (prostrations), *Pranipata* (surrender), *Gamana* (pilgrimage) etc. These measures are recommended in mental disorders caused by *Agantuj* (extraneous) factors and administered judiciously after considering the nature, faith, religiosity, culture and educational level, of the patient. (Ch. Shi. 9/93-4). These may be useful in all types of *Manasa Vikara* i.e. both psychosis and neurosis.

B. YUKTIVYAPASHRAYA CHIKITSA:

This refers to the use of *Ahara* (diet) and *Aushadha* (drugs). Under *Ahara*, it is interesting to note that different food articles like *Kheera* (milk), *Ghrita* (ghee), *Draksha* (grapes), *Panasa* (Jack fruit), *Brahmi* (*Centella asiatica*- plant), *Mahisha-mamsa* (buffalo meat), *Sarpa-mamsa* (snake meat), *Kurma-mamsa* (tortoise meat), *Vastuka* (goose foot/kakamaci/ *solanum nigrum*), *Barhi-mamsa* (cuckoo meat), *Maha-kusmanda* (ash gourd), *Kapitha* (wood apple), *Matulunga* and others are recommended as beneficial in various mental disorders. Thus, these and other descriptions available in the classics on *ahara* particularly in relation to mental disorders are worthy of scientific study. Under drug therapy, it is said that, in all types of mental diseases where *Vata*, *Pitta* and *Kapha* are deranged, *Dosha Shodhana* or *Shroto-Suddhi* (elimination of *dosha* or *Shodhana* or *Shroto-Suddhi* (elimination of *Dosha* or cleansing the cells) has to be done by adopting various *Sodhana* (purificatory measures). When the cleaning is properly done, *Samana Aushadha* (palliatives) and *Rasayana* (tonics) are given in order to bring back the deranged *Mana* to normalcy.

C. SATVAJAYA CHIKITSA:

The aim of this therapy is to restrain mind from desire for unwholesome objects. This permits considering, occupational, behavioural and like therapies as well, since the ultimate aim of them also would be to restrain mind from unwholesome objects. Speaking on the role of the therapist, it is stated that, the therapist should be ‘*Shurut*’ implying that he should be compassionate to the patient and involve himself in solving the problems of the patient. This clearly indicates the importance of the therapist if the therapy administered has to be beneficial to the patient. The best approach to achieve the goal of *Satvavajaya Chikitsa* as mentioned earlier is through *Gyanam* (knowledge), *Vigyanam* (analytical thinking), *Dhairya*, (courage), *Smirti* (memory) and *Samadhi* (concentration) according to *Acharya Charaka*. Mental disorders caused by *Kama* (excessive desire), *Shoka* (grief), *Bhaya* (fear) *Krodha* (anger), *Harsha* (delight), *Irshya* (jealousy), *Moha* (agreed) should be countered by inducing the opposites passion in order to neutralize the causative ones. The above two approaches can be said to be more useful in *Manasa Roga* caused on account of certain external psychological reasons which refer to certain *Manasa Vikara* (*Kevala Manasa Vikara*) related to neurotic conditions.

6. Manasa Vikaranutpadana (Prevention of Mental Disorders)

In support of its concepts on preservation and promotion of health and prevention of illnesses, *ayurveda* lays due stress on various measures to be adopted in order to promote mental health and prevention of health and prevent mental disorders. These measures find lucid descriptions in the chapters devoted to *Dinacharya* (daily regimen), *Ritucharya* (seasonal regimen), *Sadvritta* (code of virtues), *Roganutpadana* (prevention of diseases) and *Aahara Visheshha Aayatana* (rules pertaining to food and drinks) in the classics of *Ayurveda*.

In order to be free from mental disorders *Ayurveda* prescribes that one should not allow becoming a victim of impulses like greed, grief, fear, anger, jealousy, impudence, vanity etc. Further, it declares that, one who speaks truth, refrains from over indulgence in alcohol and meat, hurts none, avoids overstrain, fair spoken, always compassionate and given to wholesome eating, would enjoy the benefits of sound mental health. In fact it would only be appropriate to consider the *Ayurvedic* view points in this regard as a ‘socio-moral value system’ which if adopted with modifications to suit our needs without digressing from the core of these concepts, would be of great aid in warding off many a mental disorder and promote the mental potentialities of mankind. It would also richly contribute in preventing and treating many psychosomatic conditions like peptic ulcer, bronchitis, blood pressure, eczema and diabetes to mention a few. All these measures are aimed at bestowing relaxation and mental equipoise which are the basic prerequisites of a sound mind. They are particularly relevant to our times when we are forced to battle continuously against ‘stress’ and ‘strain’ for our very survival.

7. Yoga For Mental Health

Poor mental health conditions, including stress and depression, are known to increase the risk of acute respiratory infections. Rising numbers of COVID-19 cases and deaths possibly raise stress and anxiety, while loneliness and depressive feelings are likely due to mandatory social distancing measures. Consideration of the mind is another distinction of *Ayurveda* and *Yoga*. Several measures for mental health are described, including *Pranayama* and meditation. *Pranayama* is known to improve lung function. Meditation is found to reduce inflammation markers and influence markers of virus-specific immune response⁶. *Yoga* including meditation could be a simple and useful home-based practice for the prevention and post-recovery management of COVID-19.

Common *Yoga* protocol for Covid-19 objectives according to ministry of AYUSH of India help to improve respiratory and cardiac efficiency, reduce stress, anxiety and enhance immunity.

Starting: Prayer (1min.)

Loosening Practices: Neck Bending (2min.), Shoulders movement (2min.), Trunk Movement (1min.), Knee Movement (1min.)

Standing Asana: *Tadasana* (1min.), *Vrikshaashan* (2min.), *Pada-hastasana* (1min.), *Ardha Chakraasana* (1min), *Trikonasana* (2min.)

Sitting Asana: *Bhadraasan* (1min.), *Vjaraasan* (1min.), *Ardha Ushtraasana* (1min.), *Ushtraasana* (1min.), *Shashakasana* (1min.), *Utthana Mandukasana* (1min.), *Vakrasana* (2min.)

Prone Lying Asana: *Makarasana* (1min.), *Bhujangasana* (1min.), *Shalbhaasan* (1min.)

Supine Lying Asana: *Setubandhasana* (1min.), *Utthanapadasana* (0.5min.), *Ardhahalasan* (0.5min.), *Pawana Muktasana* (2min.), *Shavasana* (2min.)

Kriya : *Kaphalabhati* (2 rounds, 30 strokes each for 2min.)

Pranayama: (i)*Anuloma Viloma* (2min) (ii) *Ujjayee Pranayama* (5 rounds for 2min.) (iii) *Bhramari Pranayama* (5 rounds for 2min.)

Dhyana: Meditation (5 min.)

Closing: *Shanti Patha* (1min.)

Total Duration for Each session is 45min.

Jalaneti kriya and *Sutraneti* weekly once or twice. *Yoga Nidra* for 20 min. weekly twice or thrice also advised.

8. Conclusion

Yoga is recognized as a form of mind-body medicine that integrates an individual's physical, mental and spiritual components to improve aspects of health, particularly stress related illnesses.⁷ Evidence shows that stress contributes to the etiology of heart disease, cancer, and stroke as well as other chronic conditions and diseases.

Therapeutic *yoga* is defined as the application of *yoga* postures and practice to the treatment of health conditions and involves instruction in yogic practices and teachings to prevent reduce or alleviate structural, physiological, emotional and spiritual pain, suffering or limitations. Results from this study show that yogic practices enhance muscular strength and body flexibility, promote and improve respiratory and cardiovascular function, promote recovery from and treatment of addiction, reduce stress, anxiety, depression, and chronic pain, improve sleep patterns, and enhance overall well-being and quality of life.

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