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Ayurvedic Diagnostic & Management Protocol for Covid-19- A Proposal

*An Initiative by a Working Group of Ayurvedic
Clinicians for Covid-19*

*(For use of a registered medical practitioner under
government approval only)*



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An Ayurvedic Perspective of 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. It was declared as a pandemic by WHO on March 11, 2020, as it has confirmed its presence in all continents except Antarctica^[1].

Ayurveda has unique methods of approaching a newly detected disease. Rather than focusing on the microbiological etiology, Ayurveda embraces a wholistic technique for elaborating the details of the disease at hand. We have 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 (adhishthanam) and etiological features (samuthaana visesham)^[2]

Vikaara Prakrti

Considering the Vikaara Prakrti, primarily, as 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 Bhuutabhishangajam (microbiological etiology)^[4]

The management of Aagantuja vikaara should also follow the lines of nija vikaara. Hence, identification of the suitable pathological model along with the associated features is important. Referring to the details available from the places where the Covid-19 has maximally affected, 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 (*jwaram*), 76% were having cough (*kaasam*) and 44% were having myalgia (*anga mardam*) and fatigue (*tandra*).

Among those developed pneumonia, 99% were having fever (*Jwaram*), 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*)^[5].

In another report, the main clinical features suggested are fever (*jwaram*), cough (*kaasam*), shortness of breath (*s'waasam*). If the situation aggravated, there will be labored breathing (*s'rama s'wasam*), persistent pain or pressure in the chest (*uro vedana*), mental confusion

(*moham*), inability to arouse (*samja naas'am*), cyanosis (*aasya s'yavata*)^[6] 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 can be considered as a kapha-vaata samsargaja jwaram^[7], of course, with pitta association^[8], in the beginning, considering and comparing with the clinical features mentioned in classics. But it acquires the status of a full sannipata jwaram^[9] in certain subset of patient population, as the condition progresses.

See the excerpts from the article^[10] written by doctors who managed the illness at China.

“Three adult patients presented with severe pneumonia and were admitted to a hospital in Wuhan on December 27, 2019. Patient 1 was a 49-year-old woman, Patient 2 was a 61-year-old man, and Patient 3 was a 32-year-old man. Clinical profiles were available for Patients 1 and 2. Patient 1 reported having no underlying chronic medical conditions but reported fever (temperature, 37°C to 38°C) and cough with chest discomfort on

December 23, 2019. Four days after the onset of illness, her cough and chest discomfort worsened, but the fever was reduced; a diagnosis of pneumonia was based on computed tomographic (CT) scan. Her occupation was retailer in the seafood wholesale market. Patient 2 initially reported fever and cough on December 20, 2019; respiratory distress developed 7 days after the onset of illness and worsened over the next 2 days at which time mechanical ventilation was started. He had been a frequent visitor to the seafood wholesale market. Patients 1 and 3 recovered and were discharged from the hospital on January 16, 2020. Patient 2 died on January 9, 2020. No biopsy specimens were obtained.”

These statements work as a pointer towards the nature of progression of the disease.

The worsening of the illness which culminates in death is mostly seen in the geriatric age group as well as those with co-morbidities. Let us have a look into the case-fatality ratio^[11]

The patients who are having no co-morbidities are having an overall case fatality rate of 0.9%.

The case fatality rates of those above 60 years are as follows

60-69 – 3.6% 70-79- 08% >80- 14.8%

The case fatality rates of those with co-morbidities are as follows

Cardiovascular diseases – 10.5%

Diabetes mellitus – 7%

Respiratory diseases, hypertension, malignancies – 6%

Thus, the patients belonging to a geriatric age group and those with existing co-morbidities are more prone to be in the group that worsens once the disease progresses. Hence, in that group the clinical course can be charted as follows- symptomatic mild illness at presentation, leading to moderate illness culminating in very fatal illness.

Another sequencing of the clinical course^[12] is as follows-

Mild illness, Pneumonia, Severe pneumonia, Acute Respiratory Distress Syndrome (ARDS), Sepsis, Septic shock

An analysis of the clinical course can lead to the following conclusions

1. The subsets of patients who are getting worsened progressively, are those having a deteriorated state of Rogi balam already due to old age or due to co-morbidities.
2. The co-existing pitta, even if very mild, will be causing syandana and s'oshana^[13] in the chest progressively, which cannot be resisted by the body due to the already compromised rogi balam.
3. This process can be technically described as a dhaatupaaka, a dysregulated host response, from the context of sannipaata jwaram^[14]
4. This results in the rapid instability of ojus leading to sepsis and eventually septic shock.

Because of the syandana and s'oshana property of intervening pitta, the jwara may end up in the fatal forms of sannipaata jwara, of which two special fevers worth mention- Vaata predominant sannipaata jwaram titled as Visphaarakam^[15] and Vaata –kapha predominant sannipaata jwaram titled s'ekhrakaari ^[16].

Along with the change in the nature of jwaram, s'wasam which was a feature previously, now becomes prominent as an upadravam.

Thus the entire clinical course of covid-19 can be postulated as having these stages

Clinical Staging of the Disease

Stage 1

Kapha-vaata sannipaata jwaram

Management guideline- Jwara s'amanam, kapha s'amanam, vaata anulomanam and protection of rogi-balam

Stage 2

Aggravation of the already existing situation

Management Guideline- Jwara s'amanam, kapha s'amanam, vaata anulomanam protection of rogi-balam, regulation of the status of pitta, especially its drava and ushna gunas. Particularly important in geriatric and those with co-morbidities, as this is the junction in which the fatal pathological processes starts

Stage 3

The stage of initiation of dhaatu paakam, due to unchecked activity of the pitta dosham

Management guideline – Jwara s'amanam, medicines to stop dhaatu paakam, medications for bronchodilation and expectoration, protection of rogi balam

Stage 4

Dhaatu paakam proceeds and s'waasam coming forwards as an upadravam

Management guideline – the same as above, but in a more potent and aggressive manner. Special procedures enlisted in sannipata jwaram like tavidu kizhi, varavu kashayam, sanni kizhi etc. need to be applied

Stage 5

Sannipaata jwaram titled as Vispharakam or s'eehrakaari manifests and becomes fatal- needs technological support along with aatyayika cikitsaa

Adhishtaanam - Site

The proper adhishtaanam of covid 19 can be suspected as Koshtam itself, but the manifestation happens in uras, which itself is a predominant site of kapha. Many a time, it has been found that pitta dosha exerts a significant pathological influence on Kapham. The ushna guna of pitta, in combination with the sa-sneha and drava guna will exert a pathological effect on kapha, thereby making it a-sthira (unstable) and a-badha (un bounded). Here also, as stated in the description of the stages, pitta can trigger this pathological cascade leading to the syandana and further s'oshanam. This can lead to dhaatu paakam and death.

Samuthaana vis'esham – the etiology

The occurrence of a kapha-vaata predominant sannipaata jwara as a janapada-udhwamsa in vasanta rtu points to the rapid and violent vitiation of vaayu, udaka, des'a and kaala due to the activities that can be earmarked as prajnaaparaadha.

Moreover, the predisposing factors such as the old age and co-morbidities are causes of deteriorated rogi bala and which resulted in instability of ojus and fatality

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STAGE WISE MANAGEMENT PROTOCOL

Stage 0

Patient with a positive travel history / contact history / home quarantine/ isolation

No symptoms or very mild symptoms

Consider as the onset of kapha-vata jwara. Consider the patient's age and other co-morbidities.

Advise him with the community prevention protocols

- ❖ 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)/ Panikoorka(Plectranthus amboinices) with Haridra(Termeric)
- ❖ Gargling – Water boiled with Haridra(Turmeric)/Thriphala/Yashtimadhu/ Lavana
- ❖ Dhoopanam - Sheemakonna/ Nimba/Coconut shell+ hingu/sarshapa+ tunic of garlic/onion+ salt, or All
- ❖ Rub Rasnadi choornam over scalp.
- ❖ Favorable:- Easily digestible light food like kanji; Chatni made up of Goose berry(Amalaki), Onion, Curry leaf, Ginger and Turmeric; Cooked vegetables; Soup made up of Green gram. Use warm water for drinking. Take complete rest.

- ❖ Unfavorable:- Heavy , Spicy, oily or fried foods; Junk foods, Curd, Cool drinks, Head bath; Exercise; Mental stress; Exposure to fan/Ac

Stage 1

Pathologic hallmark

Kapha-Vaata Sannipaata Jwaram

Therapeutic targets- Jwara S'amanam, Kapha S'amanam, Vaata Anulomanam and protection of Rogi-balam

Kashayam:

- ❖ Pathyakusthumbaradi Kashayam – (Ah.Ci. 1/62-63)- Kapha Vata Samanam
- ❖ Vyaghryadi Kashayam – (Ah.Ci. 1/61)-Vata Kapha Samanam
- ❖ Amruthotharam –(Sy. jwaraprakaranam)- Amapachanam

Panajalam(Medicated drinking water) and gruel

- ❖ Dasamoolakatuthrayam – (Sy. Swasakasa prakaranam)-Kaphanubandham
- ❖ Shadangam – (Ah.Ci 1 /15)- Pittanubandham
- ❖ Panchakola sidha yavagu

Gutika:

- ❖ Vettumaran – (Sy. gutika prakaranam)- Kapha Vata Samanam
- ❖ Mukkamukkadukadi –(Sy. Gutika prakaranam)- Kapha Samanam
- ❖ Vilwadi – (Ah.Ut.36/84-85)-Jwaraharam, Visha haram
- ❖ Lakshmi Vilasa Rasam – (Br. Rasayanadhikaram 55-58) -Kapha Vata Samanam
- ❖ Lokanatha Rasam – Pachanam
- ❖ Anandabhairava rasam

Chooranam;

- ❖ Thaleesadi choornam – (Ah.Ci.4/58-60-)Kapha Vata samanam
- ❖ Sitopaladi choornam – (Br.14/27-28)-Pitta Vata samanam
- ❖ Vyoshadi Vatakam – (AH. Ut. 20/4-5)-Kapha Vata samanam
- ❖ Lavankatvakadi choornam

Arishtam;

- ❖ Amritharishtam –(Sy. Arishtaprakaranam) -If Jvara is dominant
- ❖ Vasarishtam – (Sy. Arishtaprakaranam)-If Kaasa is dominant
- ❖ Kanakasavam – (Sy. Arishtaprakaranam)-If Swasa is dominant
- ❖ Panchakolasavam- for paacanam

Stage 2

Pathological hallmark

Aggravation of the already existing clinical situation

Therapeutic targets - Jwara s'amanam, kapha s'amanam, vaata anulomanam protection of rogi-balam, regulation of the status of pitta, especially its drava and ushna gunaas. Particularly important in geriatric and those with co-morbidities, as this is the junction in which the fatal pathological processes starts.

Kashayam:

- ❖ Elakanadi Kashayam(Sy. Rajayakshma prakaranam) + Lakshadi choornam(Br.27/13) – Kapha Vata haram with Pittanubandham
- ❖ Balajeerakadi Kashayam(Sy. Swasakasa prakaranam) – Vata Kapha with Pittanubandham
- ❖ Abhayapippalimooladi Kashayam(Ah.Ci. 1/55) – Anulomanam, Vata Kapha haram

Panajalam:

- ❖ Nayopayam(Sy) – Vata Anulomanam, Swasahidhma haram

Gutika:

- ❖ Tribhuvana Keerthi Rasam(Br.) – Vata Kapha haram

Stage 3

Pathological Hallmark

The stage of initiation of dhaatu paakam, due to unchecked activity of the pitta dosham

Therapeutic targets – Jwara s'amanam, medicines to stop dhaatu paakam, medications for bronchodilation and expectoration, protection of rogi balam

Kashayam:

- ❖ Dusparsavasadi Kashayam (Sy- Rajayakshma)
- ❖ Bharngyadi kashayam – (Sy- Jwaram)

Rasa preparation:

- ❖ Hingula Bhasma (Rasaratna samuccayam)
- ❖ Abhraka Bhasma (Rasatharangini 10/39-42)
- ❖ Rasa Sindooram(Rasatharangini 6/162-176)
 - Above three drugs to manage the progressing respiratory infection
- ❖ Arogya Vardhini Vati(Rasendrasarasangraham.13/105)
- ❖ Suvarnamalini vasanta rasam
- ❖ Poorna chandrodayam rasam
 - Above three drugs to arrest the dhaatu paakam

Arishtam:

- ❖ Vasarishtam (Sy- arishta yogas)
- ❖ Kanakasavam(Sy- arishta yogas)
- ❖ Kasthoori Kalpa Rasayanam(Patented formulation)

Stage 4

Pathological hallmark

Dhaatu paakam proceeds and s'waasam coming forward as an upadravam, and creates fatality

Therapeutic targets – same as above, but in a more potent and aggressive manner.

Special procedures enlisted in sannipata jwaram like tavidu kizhi, or hot water bag, varavu kashayam, sannu kizhi etc. need to be applied

Kashayam:

- ❖ Darunagaradi Kashayam(Sy- Jwaram)

Rasoushadhi:

- ❖ Siddhamakara Dhvajam(Rasa tarangi)
- ❖ Rasa Manikyam(Sidha bhesaja manimala/Jwara) with Aswagandha choornam in 1:15 ratio

Arishtam:

- ❖ Sapthachhada Rasam(Ah. Ci. 4/33)with Kasthuri Kalpa Rasayanam

Stage 5

Sannipaata jwaram titled as Vispharakam or s'eehrakaari manifests and becomes fatal- needs technological support along with aatyayika cikitsaa

- ❖ Navapaashana kettu (Sidha)– a variant of pottali kalpana in rasa sastra

Stage of Convalescence :

Pathological hallmark

The patient will be in a weakened stage due to medications and disease. Many a time the patient will be disturbed by sequelae like post viral respiratory mucosal hypersensitivity

- ❖ Agasthya rasayanam(Ah.Ci. 3/127-132)
- ❖ Chyavanaprasam(Ah.Ut. 39/33-41)
- ❖ Kooshmanda Rasayanam (Ah.Ci. 3/114-117)
- ❖ Indukantham Gritham (Sy-Ghruta yogas)
- ❖ Bharangi gudam

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. Order the needed laboratory or imaging panels as and when required
4. Assess the koshta, agni status of the patient.
5. Definitely have an assessment of the vyaadhi-avastha in a meticulous manner, as some medicines may be contra-indicated in some specific avasthas.
6. Assess the rogi bala using the ten-point clinical examination protocol (das'a vidha pareeksha vidhi) and calculate the functional status of the patient.
7. Assess the status of ojus and predict the chance for an immediate casualty.
8. It is mandatory to read the Ayurvedic diagnostic and pathologic approach to Covid 19 prior to the management protocol, and understand the pathologic processes happening at different stages of disease process.
9. The selection and combinations of medicines should be done considering the bala of rogi, agni and koshtam, and the rogavastha.
10. The dosage of each pharmaceutical preparation shall be fixed as per the classical guidelines.
11. The medicines described in each stage shall be utilized judiciously in the succeeding stages also.

12. Diet and regimens as in stage 0 may be continued during the treatment period.
13. General safety measures for doctors, paramedics and health workers need to be ensured in the facility.
14. The technological support of western medicine has to be ensured when and where necessary.

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