IMPORTANCE OF PATHYA-APATHYA AS PREVENTIVE AND CURATIVE CARE IN URDHWA-JATRUGATA ROGAS W.S.R TO COVID-19

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ABSTRACT

 Entire mankind across the world is now suffering physically and mentally by Covid-19, an infectious disease caused by newly discovered corona virus. Even after observing social distancing, hand washing, wearing mask as part of breaking the chain for prevention, it became pandemic very easily causing massive number of deaths in developed countries also. Covid-19 positive cases are still rising and a second wave of infection are reported in many countries. So in this scenario enhancing Vyadhikshamatva of the body is very important in preventive aspect which is well explained in Ayurveda, an ancient medical science originated in India centuries back. Out of the 8 branches of Ayurveda, Shalakya tantra is known as Urdhwajatrugata Roga Chikitsa as it deals with diseases pertaining to organs above Jatru (clavicle). Ayurveda is considered as life science as it emphasize more on preventive aspect of disease through Pathya- Apathya (wholesome and unwholesome factors) described in Dinacharya (daily regimen), Ratricharya (night regimen), Ritucharya (seasonal regimen) and Sadvritta (code of conduct) and also gives importance to mental health as mind and body are inter related which is explained in Achara rasayan. This conceptual study is aiming to look into the Pathya-Apathya explained in Ayurvedic classical texts which can be used in preventing and curing Covid-19 by enhancing Vyadhikshamatva (acquiring Bala of Dhatus and resisting strength against Covid-19) through maintaining the equilibrium of Doshas present in the body.

KEYWORDS: Ayurveda, Urdhwajatrugata roga, Covid-19, Pathya-Apathya, Dinacharya,
Ritucharya, Sadvritta, Achara rasayan, Vyadhikshamatva, Dosha, Dhatu.

INTRODUCTION
Ayurveda is based on Tridosha Sidhanta (Vata, Pitta, Kapha) and Panchaboutika Sidhanta (Prithvi, Aap, Teja, Vayu, Akash). As per Ayurveda, a person is said to be healthy if he has a balanced state of Tridosha, Saptadhatu (Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra), Trimala (Sweda, Mutra, Purisha), and should also have a delightful Atma (soul), Mana (mind) and Indriya (organs).\textsuperscript{[1]} Shalakya tantra / Urdwajatrugata Roga Chikitsa, one of the branch of Ayurveda, deals with preventive and curative aspect of diseases related to oral cavity, throat, nose, eyes, ears and head.\textsuperscript{[2]} In Covid-19, virus primarily affect upper and lower respiratory tract. In Ayurvedic classical texts, infectious diseases are considered as Agantuja Roga or Bhootabhisangaga Vyadhi. Charakacharya explained epidemics/pandemic in the context of Janapathodhwamsa (conditions devastate the human settlement).\textsuperscript{[3]} Susrutacharya described in the context of Upasargika roga that infectious diseases are spread by the usage of infected material or through close contact with the infected person.\textsuperscript{[4]} Ayurveda emphasizes Nidana Parivarjanam (avoiding causative factors) as important aspect in preventing diseases, that can be achieved by following the Pathya-Apathya (wholesome and unwholesome factors) mentioned in seasonal and day-to-day regimen.\textsuperscript{[5]} Pathya is that which doesnot deviate from the righteous path and is pleasant to the mind. Ayurveda emphasizes more on preventive aspect of diseases by maintaining Doshas in equilibrium through the Pathya-Apathya thereby enhancing the body strength which is explained in different terms as Vyadhikshmatwa, Ojas, and Bala for resisting diseases.

AIM
To study the effect of Pathya-Apathya as preventive and curative aspect in Covid-19

OBJECTIVE
- To study the Covid-19 pathophysiology
- To correlate Covid-19 pathophysiology with Ayurveda.
- To find preventive and protective measures by collecting all valuable references from classical texts of Ayurveda.

Pathophysiology of Covid-19
Covid-19 is a highly infectious disease caused by SARS-CoV-2, an RNA virus. The incubation period is 2-14 days. It spreads by droplet released when someone sneeze, cough or
talks and thus spread from person to person in close contact (within 6 feet/2 meter) or if touches nose, eyes and mouth with infected material.

First step in pathophysiological mechanism in Covid-19 is viral invasion via target host cell receptors like angiotensin converting enzyme 2 (ACE2) for which virus have a greater affinity. Out of the 4 glycoprotein of SARS-CoV-2 that is spike(s), membrane (M), envelope (E), nucleocapsid (N) – spike is responsible for viral binding and entry into host cell. Transmission of virus through large respiratory droplets, directly infect cells of upper and lower respiratory tract especially nasal ciliated and alveolar epithelial cells. In addition to the lungs, ACE2 is also expressed in various other tissues such as small intestine, kidney, heart, thyroid, testes and adipose tissues thus it may directly infect cells of other organ when viremia is present causing multi organ damage.

Following host cell binding, viral and body cell membrane fuse enabling the virus to enter the cell and cleavage by host cell proteases contribute to the widened cell tropism and enhanced transmissibility of this virus characterised by 4 amino acid insertion. Blocking or inhibiting these processing enzymes may serve as potential anti-viral target. Once the nucleocapsid is deposited into the cytoplasm of the host cell, the RNA genome is replicated and translated into structural and accessory proteins. Vesicles containing the newly formed viral particle are then transported to and fuse with plasma membrane, releasing them to infect other host cells in the same fashion. SARS-CoV-2 infection induces cellular death and injury in airway epithelial cells through diverse processes such as pyroptosis. The underlying pathophysiology of loss of olfactory and gustatory perception have been postulated to be related to direct damage of the supporting cells of the olfactory epithelium, olfactory bulb and altered function of the olfactory neurons, altered ACE2 signal transmission and accelerated gustatory particle degradation.\[6\]

Common signs and symptoms are fever, cough, and tiredness. Early symptoms include loss of taste and smell. Other symptoms can include runny nose, shortness of breath, muscle aches, chills, sore throat, headache, chest pain, conjunctivitis. Other less common symptoms have been reported such as nausea, vomiting, and diarrhoea, rash. Some have worsened shortness of breath and pneumonia about a week after symptoms start. Emergency signs and symptoms are trouble breathing, persistent chest pain, inability to stay awake, confusion, blue lips or face.\[7\]
Ayurvedic pathogenesis of Covid-19

In Ayurveda, disease explanation is done through Nidana Panchaka which include Nidana, Poorvarupa, Rupa, Upasaya, Samprapti which further helps in planning of treatment. As Nidana of disease is broadly classified into 2 types i.e, Nija and Agantuja where Nija is due to Mitya Ahara-Vihara and Agantuja is due to Bhootabhishangajanya Nidana. Agantuja Nidana produce symptoms first, then vitiate Doshas like Vata and Pitta. Thus vascular inflammatory changes that occur due to Agantuja Nidana results in redness and swelling. Agantuja vyadhi will turn to Nija Vyadhi if one has Mitya Ahara-Vihara Nidana which hampers Agni leading to Ama formation in the stomach. Due to Apaachit Amayukta Anna Rasa, Dosha prakopa occurs which cause Dhatu Vikruti and results in Dosha Dooshya Samoorchana. If Prakupita Dosha does not get pacified, then it circulates all over the body and leads to Sthanasamshraya in Srotas resulting in Srotodushti which will be seen in the form of Sanga, Vimargagamana and Atipravritti. The Sanga and Vimargagamana of the Pranavaha Srotas leads to Urdhwagamana of Udanavayu leads to Kasa, Swasa, Peenasa. Simultaneously Sanga of Swedavaha and Rasavaha will leads to Sarvadeha Santapa and result in Jwara. As there is Apaachit Aama Yukta Anna Rasa, Uttarothara Ama Yukta Dhatu takes place if the disease undergo chronicity, resulting in Sarva Dhatu Vikruti and which inturn results in Bala Kshaya. Hence this disease is seen in immune suppressed persons.[8]

Thus digestive power is an important factor to enhance body immunity so that even when microbes enter the body, it can resist the organism from producing disease. As prevention is better than cure, it is better to avoid contact with infected person and materials. Thus Nidana Parivarjanam (avoiding causative factors) plays another important factor to avoid not only Covid-19 but also for any diseases.

MATERIALS AND METHOD

Nowadays, people are prone to various diseases due to the unhealthy lifestyle which disturb the Vyadhikshamatwa of the body. Ayurveda explained the importance of healthy lifestyle through the Pathya-Apathya (wholesome and unwholesome factors) described in Dinacharya (daily regimen), Ratricharya (night regimen), Ritucharya (seasonal regimen) and Sadvritta (code of conduct). Ayurveda also gives importance to mental health without which, physical health is impossible as mind and body are inter related. Yoga, Meditation, Pranayama and Achararasayan explained in Ayurveda helps in maintaining mental health by increasing blood and oxygen flow to brain thereby acquiring normal functioning of sympathetic and
parasympathetic system, hormones and brain waves.

**Dinacharya (Daily regimen)**

In Ayurveda, Dinacharya is the regimen that a person should do daily during the whole day which is meant to maintain the Doshas in equilibrium so that a healthy body and mind can be achieved through it. Dinacharya starts by waking up early in morning (Brahma muhurta), doing excretory procedures, then brushing the teeth and cleaning the tongue with herbal twigs of Kashaya–Tikta Rasa (astringent-bitter taste) such as *Nimba (Azadiracta indica)*, *Khadira (Acacia catechu)*, *Babbul (Vachellia nilotica)* which eliminate excess Kapha Dosha. Brushing with these herbs is far better than using usual tooth paste which is sweet in taste which in turn causes accumulation of Kapha Dosha leading to dental caries. As mouth is the first part of gastro intestinal tract, any disease affecting the mouth will create difficulty in taking food which will in turn lead to derangement of Doshas and Bala of body. So regimen advised for mouth should give prime importance.

**Gandusha (Medicinal retention in mouth) & Kavala (Gargling)**

Gandusha is the procedure of retaining medicated liquid inside the mouth without any movement until Srava occurs from nose and mouth. Kavala is same as Gandusha but with movement of medicine inside the mouth. Doing Gandusha or Kavala daily with *Turmeric (Curcuma longa)*, *Saindhava lavana* (rock salt) in *Triphala (Emblica officinale, Terminalia chebula, Terminalia bellerica)* decotion which is Kapha Pitta samana, anti-microbial, antioxidant and antinflammatory or decotion prepared with *Khadir (Acacia catechu)* which reduce pain and swelling, helps in alleviating the accumulated Doshas. Thus it helps in Mukhashodhan by expelling out Kleda and provide strength to gums, teeth by increasing the blood flow and gives rejuvenation to buccal mucosa making it resistant to diseases. It prevents and helps in curing diseases of throat, nose and mouth.

Loss of taste, sore throat which are present in Covid-19 patients can also be relieved by this procedure. For Vata prakruti persons, Kavala and Gandusha can be done with lukewarm water/decotion of Vidaryadi Gana with sesame oil/meat soup. For Pitta prakruti, this procedure can be done with decotion of Saribadi Gana with milk/ghee. For Kapha prakruti, decotion of Aragvadhadi Gana can be used to do this procedure.
Nasya (Nasal instillation of medicines)\textsuperscript{[11]}

Nasya is the procedure in which medications are applied into the nostril in a specified manner to nourish the organs above the clavicle. Nasal instillation of Anutaila cause increased nasal secretion by stimulating parasympathetic system and expelling out the vitiated Dosha thus making the nasal mucosa healthy thereby preventing the entry of microbes and other diseases related to nose. Everyone can do Pratimarsha nasya with Anutaila as it is instilling only 2 drops of medicine and also it is devoid of any complication.

Loss of smell is one of the symptom in Covid-19. So practice of Nasya with Anutaila or Shadbindu Taila which is specially indicated as it is conducive for minute channels (Srotas) at proper time gives strength and clearness in sense organs, thereby it prevents diseases.

Dhoomapana (Herbal smoking)\textsuperscript{[12]}

Dhoomapana is the inhalation of herbal smoke through nostrils and mouth, then exhaling only through mouth. Covid-19 symptoms like sneezing, rhinitis, loss of smell can be relieved by smoking with Varti (smoking stick) which is as thick as a thumb, made from paste of Kapha-Vataha drugs like Guggulu (Commiphora mukul), Turmeric (Curcuma longa), Yashtimadhu (Glycyrrhiza glabra). Dhoomapana can eliminate excess Kapha Dosha that accumulates during early morning. This form of drug delivery through inhalation route have benefits such as ease of drug administration, higher bioavailability and high potential to penetrate the blood-brain barrier. Only Kapha/Vata prakruti persons can do this procedure.

Sthanic Swedana (Steam inhalation)\textsuperscript{[13]}

Sthanic swedana which is the local application of steam fomentation over the face, avoiding the eyes, is effective in expelling out accumulated Kapha Dosha in morning. It can be done by putting leaves of Tulsi (Holy basil), Mint or Eucalyptus oil in boiling water and its vapours are inhaled through nose and vapours are also applied over the face so that with the hotness
and penetrating action of herbal leaves, vapours reach all the sinuses in the face and enter the lungs during deep inhaling, which results in the clearance of sinus and lung blockage by expelling out the mucous.

**Anjana (Collyrium)**[14]

Anjana which is the application of medicine inside the eyelid to keep eye healthy by eliminating the Doshas. It can be applied in morning and evening when it is not cloudy and hot. It brings vasodilation thereby increases the blood circulation and nourishment to the eye. It also helps in the tear secretion which contain lipid layer, water layer and mucus layer, thus forms protective barrier for eyes from external environment and along with the presence of enzyme lysozyme in tear helps in resisting the attack of infection and curing the diseases. Redness of eyes occur in some Covid-19 patients as eyes are also the route of entry for novel corona virus.

As per Ayurveda Souveeranjana is advised to use daily and Rasanjana for once in 5 or 8 days. In *Darvi (Berberis aristata)* Rasakriya where alkaloid berberine in *Darvi* act as effective anti-microbial agent. Pasupatha Varti can be used to do Anjana with Salaka (probe for collyrium application) by making semi-solid paste of this drug with honey for all type of Prakruti. Kajal made from *Sahadevi (Vernonia cinerea)* plant which is having anti-inflammatory action is beneficial to eye. It is prepared by applying paste of this plant on cotton cloth and made into a Varti (stick) and gets dried in the shade. This Varti is then put to fire after dipping it in ghee and the fumes from the flame is made to collect inside a vessel which is put over the flame. The collected ashes from fumes inside the vessel are mixed with cow’s ghee and can be used for doing Anjana.

**Netra Aschotan**[15]

Netra Aschotan is the procedure of instilling 10-12 drops of cow’s ghee or medicated ghee like Yastimadhu ghrit into the inner canthus of eyes from 2 angula with Gokarnam (medicinal dispenser/dropper). This procedure helps in keeping the moisture content in the eyes with the lipid layer by preventing the evaporation of water layer in tear film. This procedure helps to reduce inflammation in the eyes. Lipid soluble particles in the medicine enter through lipophilic layer of tear film and thus nourishes the eyes along with avascular cornea.

**Dhoopana (Herbal fumigation)**

Herbal fumigation in Ayurveda is described as Dhoopana which has been mentioned in
various ancient Ayurvedic text books and practised traditionally to disinfect environment with various herbs. Fumigation with Garlic (Allium sativum) peel, Turmeric powder (Curcuma longa), Loban (Styrax benzoin and boswellia species), Ajwain (Trachyspermum ammi) seed powder reduces air bacteria. This fumigation improve microbiological quality of air and to disinfect surface. Vagbhatakarya explained Aparachita Dhoopa for fumigation which contain Guggulu(Commiphora mukul), Vacha(Acorus calamus), Sarja(Shorea robusta), Nimba(Aadiracta indica), Arka(Calotropis gigantica), Agaru(Aquilaria agallocha) Devadaru(Cedrus deodar). This is a part of preventive measures in Ayurvedic practices. Anti-microbial activity of these drugs helps to disinfect air, clothes, household items, get rid off pests.[16] Persons with cough and bronchial asthma should move away from places where herbal fumigation is doing as it may cause irritation and may aggravate the symptoms.

**Vyayama (Excercise)**

As per Charakacharya, Vyayama is the best among strength promoters. It will increase the digestive power, lightness to body and alleviate the vitiated Kapha Dosha, thus reduces related diseases. Increased blood circulation by exercise helps in nourishment of body and oxygen supply to body tissues.[17] Persons who are habituated to fat rich diet can routinely exercise in winter and spring season, using half the strength one can gather. In other seasons, it should be done using lesser strength. Pulmonary circulation becomes faster with deep breathing and increases the respiration rate. By increasing the perspiration rate, exercise helps to get rid of wastes from body. Constipation also gets relieved by increased bowel movement through exercise.

Yoga Asanas (postures) like Dhanurasana (bow posture) Ushtrasana (camel posture)and Supta vajrasana (supine angle posture) helps for chest broadening by stretching of intercostal and chest muscles thereby improving lung ventilation and thus helps in oxygen supply to whole body.[18] Excessive exercise will harm the body as it cause emaciation, bleeding disorder, fatigue, cough, dyspnoea etc.

**Ahara (Food)**[19]

“Agni Moolam Balam Pumsa”- Agni which is responsible for the metabolic activity should be kept in a balanced state. It will ultimately enhance Bala (Vyadhikshamatva) of body thus preventing occurrence of infections and other diseases.”(Baladhistanam Arogyam Arogyartha Kriya Krama”). Improper intake of food leads to indigestion thereby causing disturbance in Agni. Ayurveda gives detailed explanation on procedure of taking wholesome food and time
of intake as given below.

- While eating, out of the 4 parts of the stomach, 2 parts should be filled by solid food, 1 part with water and the rest to be left for free movement of air.
- Sweet substances should be taken in the beginning of a meal, sour and salt items in the middle and pungent, bitter, astringent foods in the end.
- Tongue loses its capacity to taste after taking some and that is why drinking water at intervals in small quantity while eating is advised which also aids digestion.
- Even a healthy person is advised to drink warm water only as per their thirst.
- Drinking water before or after food cause indigestion which will results in various diseases.
- Everyday freshly prepared lukewarm water should be drunk. It is carminative, digestive, desirable for throat, light and cleanses urinary bladder. It is also desirable in cough, asthma, rhinorrhea etc. In summer and autumn season, normal water can be used for drinking purpose.
- Drinking too much water during first 2 hours in the morning after 6 am and at night after 9 pm will increase Kleda in the body causing upper respiratory tract congestion. One should take water only according to their own thirst.
- Diluted fresh buttermilk with some amount of salt, ginger and curry leaves is a healthy drink.
- If there is indigestion, use water boiled with *Ginger, Coriander seeds, Thulasi leaves, Ajwain seeds, Turmeric*. Make it tasty by adding *Jaggery*
- Use green gram wherever necessary like in soup, curry, snacks
- Intake of food before digestion of prior food, eating food while thirsty and drinking water while hungry should be avoided.
- Ekarasabhasya (frequent usage of one type of taste) cause Daurbalya (weakness of body)
- Refrigerated water, alcohol, carbonated beverages, excessive use of pickles, hot spicy foods, garam masala, black gram, curd should be avoided.
- Virudha-Ahara (incompatible food) cause indigestion causing Ama Dosha (partial digestion and unassimilation of food leading to toxicity) by vitiation of all Doshas.
Pathya for Vata prakruti | Pathya for Pitta prakruti | Pathya for Kapha prakruti
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Use food having Madhura(sweet), Lavana(salty), Amla ras (sour), Ushna(hot), Snigha(unctuous) guna | Use food having Madhura, Tikta(bitter), Kashaya ras(astringent) Sheeta(cool) guna | Use food having Katu (pungent), Tikta, Kashaya Ras Ushna, Ruksha(dry) guna
Use Grapes, kiwi, lemon, ripe mangoes, apple, dates, pomegranate, ripe papaya, plum, strawberry, etc | Use figs, pomegranate, ripe mango, banana, orange, apple, grapes etc | Use apricot, apple, orange, pomegranate, walnut, ripe papaya, almond etc
Use fish, meat, egg, rice,wheat | Use rice, wheat, and less amount of fish, meat, egg | Use less amount of fish, meat, egg, rice,wheat
Use dried ginger, tamarind and less amount of leafy vegetabes | Use dried ginger, large onion, cucumber, leafy vegetables | Use dried ginger, millets, green gram, horse gram, elephant, small onion,yam, chilli, pepper, garam masala, fresh ginger, leafy vegetables
Use ghee, cow’s milk and milk products | Use Ghee, cow’s milk | Use less quantity of ghee, cow’s milk
Avoid excess use of above mentioned Pathya Ahara also | Avoid excess use of above mentioned Pathya Ahara also | Avoid excess use of above mentioned Pathya Ahara also

Virudha-Ahara Vihara (Incompatible food)[20]
Virudha- Aharas are considered as Visha (poison) as injudicious combination of non-toxic ingredients cause bio chemical toxin in body which result in rare diseases such as autoimmune or neoplastic affecting any system in the body. Nowadays, preservatives and colouring agents are inevitable in storage foods. Moreover synthetic hormones in poultry, pesticides in vegetables will come under this category.

Some of the main food items in present days which form Virudha-Ahara that provoke Doshas in the body leading to decreased Vyadhikshamatwa and prone to various diseases are
1. Mixing sour fruits and milk e.g. Fruit salad with ice-cream, 2. Curd and chicken eg. Vegetable-curd salad along with non-veg biriyani, 3. Egg with milk e.g. cake, 4. Paneer curry, 5. Curd with kichadi, 6. Intake of hot water mixed with honey and lemon.

Virudha-Viharas (incompatible regimen) are e.g.1. Sleeping or doing exercise just after taking food 2. Mixing hot water with cold water for drinking and bathing purpose 3. Taking bath just after doing exercise.4. Entering suddenly into air conditioned room from very hot place. Achayra charaka explain different types of Virudha Ahara –Vihara such as:
• Desha (Bhoomi / Sarira) virudha – eg: taking dry, spicy, hot food by those who are adapted to stay in dry arid place or taking unctuous, cold food by those who are adapted to humid marshy places.
• Kala virudha- eg: using hot spicy foods like pickles, meat in hot climate/cold food items during cold climate
• Agni virudha- eg: eating heavy food without having proper digestive power
• Matra virudha- eg: mixing equal quantity of ghee and honey
• Samyoga virudha-eg: combination of dried leafy vegetables/flour/germinated seeds/sour fruits/meat of goat with milk.
• Upachara virudha – eg: drinking cool water after taking ghee will result in indigestion
• Veerya virudha- eg: eating fish along with milk which are opposite in potency
• Krama virudha- eg: taking heavy food without doing defecation
• Vidhi virudha – eg: eating in open place

Unwholesome food practises are to be tapered in quarters (should not be suddenly discarded) and are to be substituted by Pathya-Ahara (wholesome food).

Non Suppressible urges[21]
Ayurveda advocates that one should take care of not to suppress natural urges otherwise it will lead to manifestation of various disease by vitiating Doshas. For example Suppression of urges like defecation, urine, sneezing will result in severe headache. Pratisyaya (rhinitis), eye diseases will occur from suppression of tears. Suppression of Udgara (belching) will cause cough, hiccough and anorexia. Suppression of hunger will lead to weakness, emaciation etc. Suppression of thirst will lead to dehydration, giddiness, deafness. Suppressing sleep cause weakness, giddiness, bodypain. Suppression of cough results in aggravation besides precipitating asthma, hiccough.

Ratricharya (night regimen)
Ratricharya is the regimen that is to be followed during night time. Its importance is well explained in Ayurveda.

Nidra (sleep)[22]
Timely sleep is necessary for the rejuvenation of the body and it relieves tiredness. As per Ayurveda, untimely sleep will cause obstruction of metabolic pathway, headache, fever, running nose, confusion, cough which are also present in Covid-19 symptoms. Day sleep which
vitiate Kapha Dosha should be avoided except in summer. Lack of sleep in night result in vitiation of Vata, giddiness, indigestion, fatigue, yawning, and body ache and improper timing of sleep will disturb brain waves. Sleeping just after intake of food also should be avoided as it cause indigestion. Nidra Kaal is from 10 pm-3am and Swapna Kaal is from 3am -6am. So people should sleep in the Nidra Kaal.

**Trataka**

Trataka is the procedure of gazing at rays from sunrise and sunset for 1 minute, then close the eyes till the feeling of rays disappear and repeat it for three times. It can be be done daily morning and evening.When we practice Bahiranga Trataka by gazing at flame from Diya, make the light to pass through the retinohypothalamic tract which affects in the activation of suprachiasmatic nucleus. More over this nucleus is believed to regulate the circadian rhythm. Therefore, any complications related to this nucleus such as insomnia can be easily eradicated.

**Maithuna (sexual activity)**[23]

According to Ayurveda, the person who follows rules and regulations with respect to sexual intercourse will be endowed with delayed ageing, good complexion strength. One who suppress this urge may suffer from diseases. Person who indulge in excess may result in deterioration of Dhatu.

**Ritucharya (seasonal regimen)**[24]

According to Ayurveda, Doshas accumulated in the body in all Ritu (seasons) which result in disease formation should be eliminated out through Sodhana (purificatory method) explained in Ritucharya or Samana process (pacify Doshas) by following the regimen. Thus Vyadhikshamatva of body get improved by maintaining the Doshas in equilibrium.

**Vasanta (spring)** – Kapha Dosha accumulated during Shishira Ritu is liquefied by the hot sunrays of Vasanta Ritu causing various diseases. This weakens the digestive fire. So this aggravated Kapha should be eliminated through Vamana (emesis), Nasya (nasal drops), exercises. Obese person can do Udwarthana (dry powder massage with Kolakulathadi choorna) in this season for reducing body fat. Intake of Laghu (light), Katu (pungent), Tikta (bitter), Kashaya (astringent), Ushna (hot), Tikshna (strong), Ruksha (dry), Adrava (solid) type of food is advised. Use of Yava (barley), Godhuma (wheat), Madhu (honey) is good in this season. Water boiled with Sunti can be used for drinking. Sleeping during day time and intake of oily cold unctuous sweet heavy food like biriyani, icecreams should be avoided.
Greeshma (summer) - As heat from sun is powerful, body can’t withstand the hotness and eventually feel tiredness, so day sleep is advised in this season. Spicy, salty and sour items like pickles, alcohol, exercises, exposure to sun, thick clothes are to be avoided. Otherwise burning sensation, oedema and Saithilya (slackness of body) will occur. Sweet, unctuous, cool, food like ghee, fruits and Sadangodakam can be used for drinking which is prepared by boiling water with herbs like Musta (Cyperus rotundus), Chandana (Santalum album), Sunti(Zingiber officinale), Ambu( Plectranthus vettiveroides), Padmaka (Prunus cerasoids), Parpata( Usira (Vetiveria zizanoids). Water made with these herbs can also be used for bathing to reduce the hotness of body.

Varsha (Rainy) - In these season, body gets weaken due to weak digestive power and Vata Dosha which is vitiated should be normalised by doing Basti. Fasting is specially recommended in this season to gain digestive power. Herbal powder of Pippali (Piper longum), Nagara (Zingiber officinale), Chitraka (Plumbago zeylanica) is advised to use by cooking with rice gruel for increasing the digestive power. Use fumigative disinfectant like dried neem leaves for killing insects and germs. Keep body warm to protect from any attack of virus when body goes down. Consumption of leafy vegetables should be avoided during monsoon season.

Sharad (Autumn) -When sun rays become hot, body also becomes hot in Sharad Ritu thereby accumulated Pitta Dosha in Varsa Ritu gets aggravated leading to various diseases. To pacify aggravated Pitta Dosha, the use of ghee, bitter herbal drugs, Virechana (purgation), Raktamoksha (bloodletting) are advocated. Regimens explained in Greeshma ritu also can be followed in this season.

Hemanta (early winter)- cold atmosphere brings about blockage of dissipation of body heat which increases the metabolism in body to tide over the outside cold, which in turn increases the digestive power. In the absence of adequate food, body tissues will break down. So in this season hot oil whole body massage is needed to reduce the effect of cold. Meat soup with ghee, food made with rice flour and wheat, milk products, hot water for drinking and bathing should be used. Staying in warm rooms, using warm clothes, doing moderate exercise and sex as per ability, consuming sweet, hot, heavy food is advised. Exposure to cold wind, staying in cold rooms, cold drinks, light /dry /stale food, less quantity of food should be avoided.

Shishira (extreme winter) - As intensity of cold increases in this season, same regimen in Hemanta is to be followed.
Persons living in places with hot, dry area can follow regimen advised in summer, autumn season and those living in cold area can follow hemanta-sisira season regimen and in continuous rainy area people should follow rainy season regimen.

Ritusandhi is an important concept related to Ritucharya which is the last 7 days of previous season and first 7 days of ensuring season i.e. total 14 days. This time is more critical in terms of Dosha imbalance, so one should be very vigilant in these days. One should slowly give up the regimen of previous season and adopting the regimen of new season simultaneously.

**Practices for mental health in Covid-19**

We have seen that so many people are suffering from mental problems related to lockdown due to loneliness, jobless situation, and lack of money, lack of attachment with their near and dear ones. As every media are competing to deliver most recent updates on covid cases and emphasising its negative effect, even though it meant to keep people aware about the situation, it rather create too much fear towards Covid-19. During lockdown days, youth and children started spending their free time in smartphones for social media, online and offline gaming which in turn affect their mind by getting addicted to it. Older people above 60 age in a nuclear family or living in flat are mentally affected by covid as they are prohibited from going out of home to spend their time with their friends or sitting in a park. As per Acharya Charaka, causative factors for physical and mental diseases are wrong utilisation, over utilization, and non-utilization of objects of sense organs, time and intellect.\(^{[25]}\) In this situation, Ayurveda has major role in maintaining a good mental health through the principles mentioned in Sadvritta and Yoga.

**Sadvritta (code of conduct)\(^{[26]}\)**

Sadvritta comprises of 2 words ‘Sat’ meaning good and ‘Vṛtta’ meaning Achara or regimen association with good people leads to development of good behaviour which can be considered as Sadvritta.

- Spend time in worshipping God or supreme and chant mantra so that they can concentrate their mind in one thing for the well-being of himself and for others. Prayers have so much effect in creating positive energy.
- One should follow path of abstinence, happiness, getting inner peace, acquire knowledge through reading informative books thus utilising the precious time, donations and help people who lacks money and food which provide happiness in present Covid-19 situation,
and detachment over usage of social media which feeds one’s mind with unwanted news.

- One should avoid yawn, sneeze laugh without covering mouth.
- One should not spit, micturitate in public place, drink alcohol, insult others, have ego, jealousy, fear, anger.
- One should not be under the control of sense organs, allow the fickle mind to rule, and over burden the intellect.
- One should not sleep in excess or be awake throughout night, eat excess and initiate quarrel.

Achararasayan[27]
- One should always speak truth, refrain from anger, alcohol, and violence.
- One should be peaceful, avoid exertion, speak sweetly, practice chanting mantra and cleanliness.
- One should be courageous, generous, respect God and elders, be away from cruelty and always kind to all.
- One should sleep and get up at proper time, be devoid of wrong thoughts, inclined towards philosophy, read religious books.

Suppressible urges[28]
- One should control urges of Kama (desire for things possessed by others), Krodha (anger), Lobha (greed), Moha (confusion), Mada(ego), Matsarya( unhealthy competition), Dukh (grief), Bhaya (fear), Ershya (jealousy), Raga (excessive attachment), Autsukya (anxiety), Arathi(restlessness).
- One should avoid back biting, desire for other women, and speaking harsh words.

By practising the feeling of gratitude and love, which has the maximum high mental frequency can help to enhance Vyadhikshamatva which can fight against diseases and microbes which are low in frequency.

Yoga & Meditation[29]
According to Bhagavat gita, Yoga is the state of Balance between body and mind or it is the cessation of mental modification (Citta vrttis) due to mind, intellect and ego. By the practice of Yoga all sorrows and blemishes are cured, one is enlightened with knowledge and Viveka (wisdom). Hymns or Mantra has certain vibration which produce effect which calm down the mind. According to Bhagavat gita, word begins from “Om” is a universal mantra. Yoga helps
in realising self-consciousness. (Tatvamasi).

As per Charakacharya, Vishada (depression) aggravate the disease intensity. Normally people are under mental stress due to problems related to job, family, finance and covid situation is giving extra burden to their life which leads to suicide attempts. Mental stress affects the autonomic and endocrine functions and sympathetic nervous system which result in blood pressure and heart attack. Yoga easily achieve voluntary control over autonomous nervous system relieves stress.

Pranayama (breathing exercise) reduces body metabolism by lowering oxygen consumption and lung circulation is favourably influenced thereby improving lung ventilation. Practice of Yoga rejuvenate the body and prevents ageing.

Mental purity is achieved through principle and ethical rules in Yoga like non- violence, observation of truth, non- stealing, self- abstinence, non- greedy, cleanliness, self- control, contentment, self -study, prayers, yogic postures, concentration, fixed attention, meditation absolute contemplation.

Meditation is an effortless single thought condition and to calm the the mind by reducing the overstimulated sympathetic system during mental stress. Thus relief from insomnia, normalization of high blood pressure, beneficial effect on bronchial asthma, increased intelligence and concentration.

Yogic postures like Shirhasana (Stand-on-head posture), Halasan (Plough posture) improve blood circulation of brain, recondition the body and mind to bring about the highest possible muscular tone, mental calmness and organic vigour. Gives importance to strengthening the body.

Trataka –gazing at flame from Diya improves mental concentration and visual power.

Neti (cleansing of nasal passages) is beneficial for preventing and relieving various nasal infections.

Rasayan\[^{30}\]  
Rasayan is that drug which nourishes and rejuvenate Dhatus and Srotas (channels). Thus body gets Bala (strength) or Ojas which help to tackle infections and diseases. Also it prevent early
degenerative process in body. They are good immunomodulators by enhancing Vyadhikshamatva. Guduchi, Triphala are good Rasayan. Likewise some formulations such as Chyavaprasa, Agastya rasayan, Kushmanda rasayan, Pippali rasayan, Amruthaprasam, Amalaka rasayan can also be used according to different body constitution and Agni status.

CONCLUSION

According to Acharya chakrapani 2 terms have been used in the context of Vyadhikshamatva i.e., VyadhiBalaviradhita (reducing the strength of diseases) and Vyadhirutpadhaka pratibandhatva (prevention of diseases yet to be manifested). The secretion of endocrinal glands are Ojas and it would be perfect when the nutrition of subsequent Dhatu is correct. Ojas is vital in the defence mechanism of body. In life style disorders and malnutrition, loss of Ojas is a constant feature, prone to recurrent infection and vulnerable to Covid-19 also. Prakrutha kapha (normal state of kapha Dosha) in the body gives Bala (strength). Bala can be achieved through Sahaja-Bala (inborn strength) Kalaja-Bala (obtained by age and environmental factors), Yuktikrutha-Bala which is gained through Rasayana, exercise and Satmya (adopting wholesome factors).[31] As world is facing a global health crisis due the Covid pandemic, it is the time to utilize our traditional health system and knowledge in preventing and curing diseases by enhancing Vyadhikshamatva by following the above mentioned regimens.

REFERENCES


