



Novel corona Virus (2019-nCoV) - An Ancient Ayurveda Epidemiology Literature Review.

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Abstract:

Corona viruses are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death. Initially, the World Health Organization (WHO) had mentioned 2% as a mortality rate estimate in a press conference on Wednesday, January 29 and again on February 10. However, on January 29 2020 WHO specified that this was a very early and provisional estimate that might have changed. 3.4% Mortality Rate estimate by the World Health Organization (WHO) as of March 3 2020. The concept of epidemic was very much well defined in *Ayurveda*, *Acharya Charaka* the great physician of all ages had mentioned the epidemic diseases under the heading of “*Janapadodhwans*”. The aim of this review

study is to understand the ancient *Ayurveda* epidemic literature, to prevent people from getting affected by epidemic diseases and to enlighten on epidemic diseases prevention & Management through *Ayurveda*.

Keywords: Novel corona Virus (2019-nCoV), severe acute respiratory syndrome, *Janapadodhwans*, *Ayurveda*, epidemic Diseases, communicable disease, *Panchakarma*, *Rasayan*.

Introduction:

Corona viruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) is a new strain that has not been previously identified in humans. Corona viruses are zoonotic, meaning they are transmitted between animals and people. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more

severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

India, being a third-world country, has encountered a variety of epidemics and pandemics through time. Epidemics is an unusual occurrence in a community or region of disease, specific health-related behavior or other health-related events clearly in excess of expected occurrence. It is a sudden, severe widespread outbreak of a disease pre-existing in the community. These are the global health problems that need to be addressed and treated viciously along with proper measures to avoid transmission to other countries.

Ayurveda describes a concept called “*Janapadodhwans*” that can approximately be compared with epidemic and its several variants based on the degree and intensity of the event.

Terms used by Acharyas for Epidemic:

Sr. No.	Acharya	Epidemic Synonym
1	<i>Charaka</i>	<i>Janapadodhwans</i>
2	<i>Sushruta</i>	<i>Marak</i>
3	<i>Bhel</i>	<i>Janamaar</i>

The birth of *Janapadodhwans* term came by Query lead by *Agnivesha to Acharya Atreya*, that “People having dissimilar nature, diet, physical strength,

homologation, mental faculties & age, simultaneously get affected by the same epidemic disease”.

Even though there is dissimilarities in the physical constitution still there are some factors as are common to all individual , they are *Vayu* (Air), *Jala* (Water), *Desh* (Land), and *Kala* (Season). *Janapadodhwans* occurs due to vitiation of *Vayu* (Air), *Jala* (Water), *Desh* (Land), and *Kala* (Season). *Charaka* has dedicated Chapter on Epidemic disorders ,that is “*Janapadodhwans Vimaniyam*”.

Characteristics of Vitiated Air:

1. Absence of Characteristic feature in conformity with season.
2. Excessive calmness or violent blow.
3. Excessive dryness, cold ,heat, humidity.
4. Excessively Cyclonic in Nature.

Characteristics of Vitiated Water:

1. Excessive abnormality in smell, colour, taste & touch.
2. Excessive Stickiness.
3. Absence of bird that move on water.
4. Reduction in number of Aquatic animals.

Characteristics of Vitiated Land:

1. Abnormality in the natural colour, smell, taste & touch.
2. Abundance of serpents, wild animals

,mosquitoes,locusts,flies,rats,owls, vultures & jackals.

3. Having jungles of grass & weeds.
4. Abundance of excessively branched creepers.
5. Presence of wild cries of birds & dogs.
6. Frequent occurrence of meteorites, thunderbolts & earth quakes.
7. Constant agitation & overflow of water reservoirs. Etc

Characteristics of Vitiated Season :

Manifestation of the characteristic features contrary to the normal conditions of the various seasons is consider to be harmful.

Vitiation of water, land & season are more harmful than those of air, water & land respectively.

While Ayurveda summarizes all the relevant concepts in one word as *Janapadodhwansa Rogas*, modern medicine describes several terminologies to explain the degree and intensity of such events that include outbreak, epidemic, pandemic, and endemic.

Classification of Diseases:

Acharya Sushrut, one of the proponents of Ayurveda, has classified diseases into three major categories in his classical treatise, *Sushrut Samhita*. These are *Adhyatmika*, *Adhibhoutik*, and *Adhidaibik*.

Sr. No.	Concept in Ayurveda	English Equivalent of Ayurvedic Concept
1	<i>Adhyatmika</i>	<i>Psychosomatic Disorders</i> 1. <i>Congenital Anomalies</i> 2. <i>Hereditary Disorders</i> 3. <i>Humoral, intestinal & Psychic</i>
2	<i>Adhibhoutik</i>	<i>Traumatic</i> 1. <i>Due to arms & Weapons</i> 2. <i>Due to Animals</i>
3	<i>Adhidaibik</i>	<i>Natural</i> 1. <i>Seasonal</i> 2. <i>Supernatural agencies</i> 3. <i>Functional</i>

Etiology of Epidemic in Ayurveda :

According to Ayurveda there are mainly three routes of Cause of all Diseases.

1. *Pragyaparadha*: Mistake of Intellect.
2. *Asatmedriyarthasamyoga*:
Improper Contact of senses with their objects, results in over stimulation & deficiency of sensory activity
3. *Parinaam or Kala*: The external environment can trigger disease by unbalancing the body through unnatural & extreme variations in temperature , Rainfall or wind which in turn leads to causation of epidemics.

Modes of communicable disease transmission:

Acharya Sushrut, one of the proponents of Ayurveda, has depicted different modes of communicable disease transmission in his classical treatise *Sushrut Samhita*. He says by physical contact (*Gātrasansparśāt*), expired air (*Niḥśvāsāt*), eating with others in same plate (*Saha bhōjanāta*), sharing a bed (*Sahasāyyāsanāccāpi*), using clothes, garlands, and paste (*Vastamālyānulēpanāt*) infectious diseases spread from person to person. These concepts are very much relevant today. Moreover, the modern texts of communicable disease epidemiology describe similar modes of disease transmission.

Management:

Ayurveda propounds an equally comprehensive four dimensional concept of *Swasthya* or health. In this context the individual factors such as *prakriti* (psycho-somatic constitution), *sattva* (mental status), *vayas* (age), *bala* (strength), *agni* (digestion & metabolism), *ojas* (immunity) etc. are to be considered. Similarly, the impact of external factors such as *desa* (habitat), *kala* (seasons), *vayu* (environment), *udaka* (water), etc. have been emphasized. *Ayurvedic* texts describe a comprehensive list of health regimen for preservation of health popularly known as *svasthavritta*. This includes *dinacarya*

(daily code of health conduct), *Rutucarya* (seasonal code of health conduct) etc. Details about life-style, diet, physical exercise, personal discipline and social hygiene (*Sadvritta*) have been described.

Ayurveda also describes in detail the role of periodical biological cleansing known as *panchakarma* and consumption of restorative remedies such as *rasayana* for promotion of health, longevity immunity. As per *Ayurveda* principles, diseases are caused due to an imbalance in the *tridosha* due to various factors.

A) Prevention :

1. Practice daily regimen and seasonal regimen especially oral hygiene, *nasya karma* (nasal administration of medicament) and *dhumapana* (medicated smoking)
2. Consume wholesome, compatible and easily digestible food,
3. Avoid the causative factors like exposure to cold weather, pollutants, pollen grains, etc.
4. Avoid *kapha* aggravating and allergic food.

Pathya Apathya

a) Should consume:

1. Daily inhalation with medicated steam.
2. Ghee after food (*uttara bhaktika sarpi*)
3. Low calorie diet, easily digestible food, raw fruits

4. Old rice (*Sali*), garlic (*rasona*), drum stick (*Shigru*), *patola*

5. Light, sour, salty, unctuous diet

b) Should avoid:

1. Fried and frozen food, allergic food

2. Perfumes, strong odours

3. Exposure to breeze/ cold/ damp weather

4. Drinking chilled water

5. Head Bath with cold water

6. Suppression of natural urges

7. Day sleep

B) Ayurvedic Medicinal Management:

1. *Nidana parivarjana*: Avoid the precipitating factors whenever possible, consume compatible diet and adopt life style modifications suitable to the disease condition.

Following Ayurvedic medicinal treatment may be used as per dosh-dush status and as per samprapti developed:

2. *Samshodhana chikitsa* (Detoxification):

I. Single Drug:

Sr. No.	Drug	Daily Dose	Compliant / Anupana	Duration
1	<i>Ardra</i> (Zingiber officinale)	5gm BD	Fry in Cow's Clarified Butter	15 Days
2	<i>Vibhitaki</i> (Terminalia bellerica)	3gm BD	Water	15 Days
3	<i>Maricha</i> (Piper nigrum)	2gm BD	Jaggery	15 Days

• *Snehana* (Oil Massage)

• *Svedana* (Body Steam)

• *Vamana* (Emesis)

• *Kaya virecana* (Purgative)

• *Shiro virecana (navana) with kshira sarpi*

• *Shadbindu taila or apamarga svarasa nasya*

• *Pradhamana nasya wth katphala churna or vacha.*(nasal administration of medicament)

• *Asthapana Basti* (Enema)

• *Raktamokhana/ siravedhana* (Blood Letting)

3. Other procedural therapies

• *Dhumapana* (Herbal Smoking)

• *Gandusha dharana*

• *Kavalagraha* (Gargling)

• *Shirobasti*

4. *Shamana Chikitsa* (Drug therapy)

II. Compound formulations :

Sr. No.	Drugs	Daily Dose	Mode of Action/Compliant	Duration
1	<i>Anu Taila</i>	6 drops in each nostril Twice daily	Nasal Administration	15 Days
2	<i>Chitraka Haritaki Avaleha</i>	6-12 gm BD	Warm Water	15 Days
3	<i>Nardiya Lakshmi vilasa Rasa</i>	250 mg BD	Honey	15 Days
4	<i>Panchatikta Guggulu Ghruta</i>	6-12 ml BD	Warm Water	15 Days
5	<i>Pathyadi Kwath</i>	10-20 ml BD	Warm Water	15 Days
6	<i>Vyoshadi Vati</i>	500mg TDS/QID	Warm Water	15 Days
7	<i>Mahasudarshana Vati</i>	500mg TDS/QID	Warm Water	15 Days
8	<i>Suvarna Vasant Malati</i>	250 mg BD	Warm Water	15 Days
9	<i>Pippali Rasayan</i>	250 mg Tapering dose	Warm Water	15 Days
10	<i>Shwasa Kuthar rasa</i>	250 mg BD/TDS	Warm Water	15 Days

1) *Rasayan Therapy* (Rejuvenation):

Rasayana therapy (Rejuvenation) has been described in *Ayurveda* as a systematic and scientific medical discipline. According to *Acharya Charak*, the substance which invigorate a healthy person by producing the best quality of *Rasa*, *Rakta dhatu* and other *dhatu*s (Basic element of body) are called as *Rasayana*. *Rasayana* aid in increasing natural immunity, enhancing general well-being, improving the functioning of all

fundamental organs of the body and keep the signs of early aging at bay.

It basically boosts the *Oja* (vital force of life) and the immune system. Most of these *Rasayana* can be used regularly as a food for maintaining balanced mental and physical health.

Classification of Rasayana:

As per contents of *Rasayana*-

1. *Aushadha Rasayana* - Based on drugs and herbs
2. *Ahara Rasayana* - Based on diet and nutrition

3. Achara Rasayana - Based on conduct and behaviour (Practice daily regimen and seasonal regimen)

Conclusion:

The world is facing to Epidemic diseases since from Ancient time. Literature related to Epidemic diseases their Causation, Prevention & Management is timely mentioned in Ancient Indian literature like *Atharveda*, *Upanishada*, *vedas* etc. *Ayurveda* has clearly mentioned detail study of *Krimivignyan* (Micro-organism) which are responsible as causative agent for diseases. *Ayurveda* has mentioned importance of daily adopting *swasthyayoga*, *Dincharya* & *Rutucharya* (Practice daily regimen and seasonal regimen) in life to prevent mankind from getting infected from community diseases.

As per *Ayurveda* principles, all diseases are caused due to an imbalance in the *tridosha* (*Vata*, *pitta* & *Kapha*) due to various factors. So therapeutic management (Oral medication & *Panchakarma*) are done to break pathology which create imbalance of this *tridosha*. Also *Rasayan* therapy helps in building *Saptadhatu* (basic elements of body) & keeping Longevity.

So we can conclude that epidemic diseases are formerly explained in details in ancient *Ayurveda* literature with their

prevention & management. We can use this knowledge as basic principle with up gradation as per current scenario for better well being.

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